



THE CHEMIST AND DRUGGIST

TELEPHONE
1852
NUMBER

TELEGRAPHIC
ADDRESS
CHEMICUS LONDON.

CHIEF OFFICE,
LONDON:
42 CANNON ST.
E.C.

ESTABLISHED IN

Branch Offices:
MELBOURNE,
SYDNEY,
and NEW YORK.

ENGLAND ... 1859.

AUSTRALASIA ... 1885.

[Registered as a Newspaper.]

[Registered for Foreign Transmission.]

Prix de l'abonnement :—The Chemist and Druggist
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No. 485. Vol. XXXV.

AUGUST 3, 1889.

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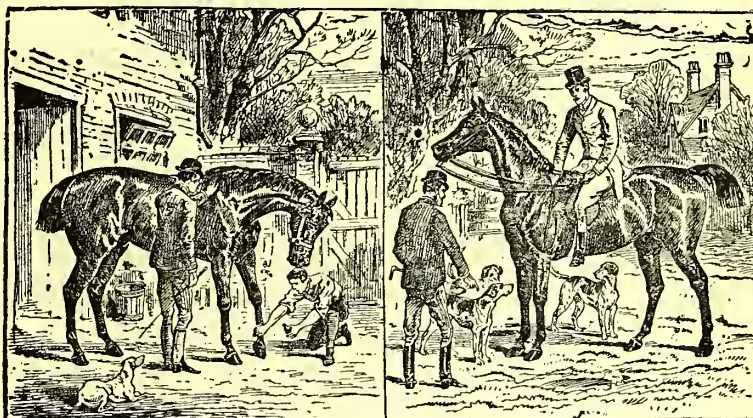
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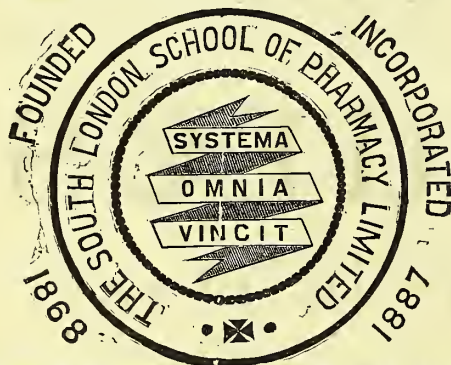
" T. R. ASHTON

" W. HEYWOOD

Mr. J. S. WHITE.

Making a total of about **FIFTY** Minors and **SIX** Majors for the year's work.

The Next Session, being the Twelfth of Mr. Turner's Pharmaceutical teaching, and the Seventh of his occupation of these rooms, will begin on **SEPTEMBER 2nd**, and no pains will be spared to maintain the high name which he has for many years held for **THOROUGHNESS and SUCCESS.**



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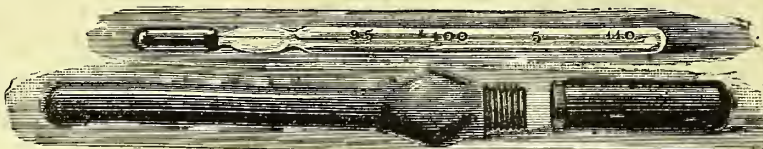
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Remittances payable to EDWARD HALSE.

TERMS

Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of 1d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C., and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

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3d. lb.; every recipe practicable; call and
see samples; list, 400, free. Tom Brooks,
Chemist, Hornsey, N.

Shop Fittings.

The entire fittings of a handsome pharmacy,
almost new, including York-glass recess,
bottles, mirror background to shelves,
cathedral glass enclosures, swan-neck
carboys, bent and upright glass cases,
counter, drawers (glass labels and knobs),
&c. Apply, Barry & Phillips, Ealing.

Special Bargains.—Second-hand chemist's
drawers, shelves, wall cases, counters, desks,
dispensing screen, large carboys, shop
rounds, and the complete fittings of a
chemist's shop, to be sold cheap. Apply,
Bowling & Govier, Gun Street, Brushfield
Street, Bishopsgate.

Wall case, 6 feet wide, 8 feet 10½ inches high;
upper part mahogany sashes, sheet glass,
deal back, shelves, deal grained cupboard
under, 5l. 15s. S. M. glass-case, elliptical
on plan, cornice, bent plate-glass sashes,
12l. 10s. New desk and sheet-glass case,
2 feet 3 inches long, 2 feet wide, 2 feet
high, shelves, 2 drawers and pigeon holes,
2l. 18s. 6d. 140 ft. run deal painted shelves,
black polished edges, 1l. 10s. 1-quart
tincture-press, 7s. 6d.; 1-gallon ditto,
1l. 7s. W. Hawke & Son, Wild Court, Great
Wild Street, W.C.

Glass bottles, job lines.—About 50 gross 3-oz.
pale green wide-mouth rounds, 4s. 6d. per
gross; 4 gross 6-oz. screw nickel-capped
pomades, 16s.; 1 gross 16-oz. ditto, 30s.;
4 gross 2-oz. tinted vials, 3s. 9d.; 3 gross
½-pint (reputed) green syrups, 7s.; 4 gross
½-pint ditto, 10s.; 2 gross 1-pint ditto, 15s.;
1 gross 1-oz. green kalis, burst off, 3s.;
1 gross 6-oz. flat sauces, stoppered, 10s.;
10 gross 3-oz. opal screw nickel-capped
pomades, 20s.; 5 gross 1½-oz. ditto, 12s.;
5 gross ½-pint white syrups, 12s.; 3 gross
1-pint ditto, 20s.; 1 gross 6-drachm lavenders,
5s.; 4 gross ½-oz. oval essences, 4s.; 3 gross
2-oz. white globe-necked panels, 7s. Hearn,
381 Kingsland Road, London.

Bargains.—Shop-rounds, ointment-jars, specie-
jars, tincture-press, drug-mill, percolators,
pill-machines, mortars, dispensing-scales,
&c.; 14 feet mahogany-fronted drawers
with lockers under, shelves over, cheap;
3-foot counter-case, fig. A4, 6-feet A18,
5l. 5s.; 8-foot wall-case, A86, 8l. 10s.;
6-foot dispensing-screen, silvcred, plate-
glass centre, marble-slab front, 6l.; desk
and case, 4l. 5s.; sponge-cases, plate-glass
case front mahogany counters. Elkanah
Natali, 207 Old Street, near County Court;
no connection with any other house of same
name.

Dispensing-screen, 7 ft., mirror centre, with
marble slab and two cases; photo sent;
5l. 15s. Hardman, Glossop.

Drawers, several nests, various lengths; also
bent-glass counter-cases, desks, dispensing-
screens, counters and shop-fittings of every
description. Great bargains; at Philip
Josephs', 54 Old Street, Goswell Road,
London, E.C.

Miscellaneous.

40 10-gallon oil-drums in good condition;
what offers? T. McCall White, Wigton.

30 Henry Lamplough's, 3l. paid, 55s.; paying
10 per cent. dividends. Calow, Lingdale,
Skeltoo.

Bradbury's fly powder, 140 tins; ozone powder,
5 boxes; carriage paid to London; best offer.
Rook, Chemist, Sittingbourne.

Copper pill-coater, as recommended in "Art of
Dispensing"; also tin rotary one. Fowler,
41 Heath Town, Wolverhampton.

Ice-cream soda fountain (see page 49, *Chemist
and Druggist*, July 27), 9 taps, all acces-
sories; cost over 90l.; price 25l. Smith,
Chemist, Gosport.

Pomade bottles in boxwood cases, 3 2-oz.,
2 4-oz., 1s. each; copying press complete,
quarto size, 12s.; air-cushions, 16-in. square,
18 in. circular, 4s. each. Weddell, Col-
chester.

For sale, together or separately, Cocking's
double-action rotary pill-machine (good
condition), 5l.; Bracher's powder-mixer
(good condition), 2l. 5s.; and Pfeiderer's
mass-mixer (new, never been used), 3l. 10s.;
if taken together, 10l. the lot; this is a
genuine bargain. H., 4 Wilton Road,
Dalston, London, N.E.

WANTED.

Every kind of dental apparatus. Maccormac,
York.

Rotary oil-pumps, cheap. Knowles, Birstall,
Leeds.

Mineral-water machine, Farrow's preferred; can
wait a month; small space. 56/40.

Some well-stoppered shop-rounds, and some
syrup bottles. Sample and price to Fields,
Chemist, Beverley.

Companion for bicycle tour, about 14 days
from August 12. James Hewlett, Chemist,
Beckenham, Kent.

Castor oil tins (empty), wanted to buy. Address,
Bannejee, Central Exchange News Rooms,
Newcastle-on-Tyne, stating quantity to sell.

Two specie-jars, not less than 36 inches high,
with stand. Price, height, and full descrip-
tion to Cooke & Co., Bargate Drug Stores,
Bristol.

Paris Exposition, 1889.

.....

The Exposition at Paris this year is probably the most magnificent display of International Exhibits ever seen. Almost all the leading countries are liberally represented. Visitors should not fail to see our display in the American Section, opposite the Post Office. Our Perfumes have found their way into all civilised countries, and this because of their excellent quality. We do not aim for a showy display of package, but for superiority in the Perfume. Consumers are often as good judges as the Perfumer himself. A few points will suffice. If it's sweet, that's the most. Then it must be fine-grained, soft, and free from sharpness. All bottled Perfumes are combinations of different flower odours. The happiest results of the blending of these flowers are well known, and the names are familiar to all. (See list below.) If they are made of the right strength and richness, they are the safest odours for the dealer to handle year in and year out. Some of the principal odours are :—

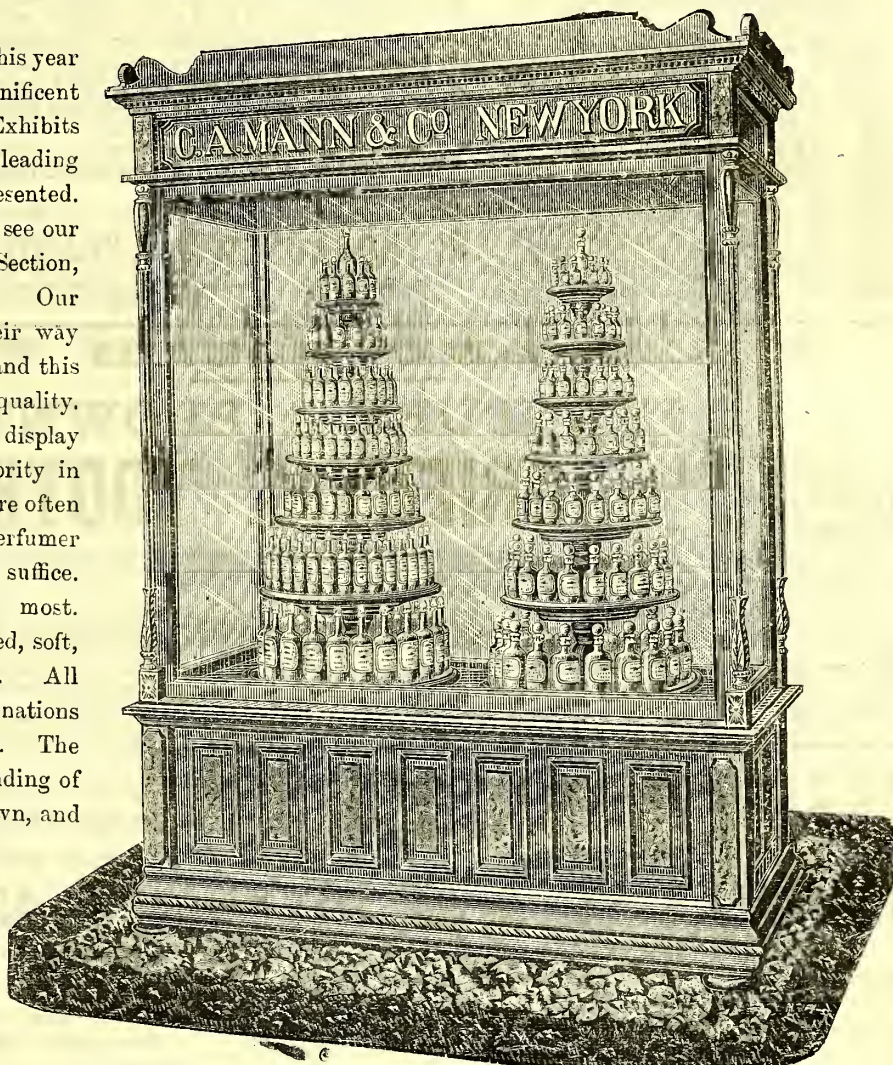


EXHIBIT AT THE PARIS UNIVERSAL EXPOSITION OF 1889.

White Rose
Lily of the Valley
New Mown Hay
Ylang Ylang
Frangipanni

Jockey Club
Heliotrope
Violet
Stephanotis
Prairie Flower

White Lilac
Wild Lotus
Sweet Briar
Carnation Pink
Moss Rose

PUT UP IN GLASS-STOPPERED BOTTLES, AS FOLLOWS:—

$\frac{1}{2}$ Ounce Size	per gross	\$30.00	2 Ounce Size	per gross	\$96.00
$\frac{3}{4}$ „	„	42.00	4 „	„	144.00
1 „	„	48.00	8 „	„	288.00
$1\frac{1}{2}$ „	„	72.00	1 lb. (18 Fluid Ounces)...	per dozen	48.00

ONE DOZEN IN BOX, EITHER IN SINGLE OR ASSORTED ODOURS, AS REQUIRED.

Additional information and Illustrated Catalogue furnished upon application.

C. A. MANN & CO., 48 Murray Street, NEW YORK, U.S.A.

ORIENTAL AROMATIC SALTS,

FOR BATH AND TOILET PURPOSES.



The **ORIENTAL AROMATIC SALTS**, when dissolved, render the water very soft, and impart a most agreeable and refreshing perfume that can be diffused with advantage in a room where the air is close and depressing.

The **ORIENTAL AROMATIC SALTS** strengthen the tissues, perfume and invigorate the body, preserving it from contagious diseases, and cleanse the pores, thus facilitating the cutaneous transpiration so necessary to life.

The **ORIENTAL AROMATIC SALTS** are unrivalled for beautifying and preserving the Skin, rendering it soft and velvet-like; and for keeping the complexion perfectly bright and clear.

They are indispensable in the Bath as well as in the Bedroom, and should be used by everybody. In most cases of Skin Diseases these Salts will be found invaluable.

Sold in Bottles at 1/6. Wholesale of the Patentees and Manufacturers—

S. TRAVADO & CO., 27 Jewry St., E.C., LONDON.

To be had also of Messrs **BREIDENBACH & CO.** Perfumers to the Queen,
157b NEW BOND STREET, W.

WHITE AND SOUND TEETH.

JEWSBURY & BROWN'S

ORIENTAL TOOTH PASTE.



This old-established and increasingly favourite Dentifrice has been over Sixty Years before the Public. It is warranted to retain its properties and keep in good condition in any climate. The original and only genuine is manufactured solely by

JEWSBURY & BROWN, Chemists, MANCHESTER,

and is distinguishable by the Trade Mark, printed in red and green, a facsimile of which is annexed. Particular attention should be paid to this guarantee of genuineness, as numerous imitations are offered. Sold universally by Chemists and Perfumers, at 1s. 6d. and 2s. 6d. The Trade and Shippers supplied by the leading houses in London and elsewhere. Bills and Show Cards forwarded on receipt of address cards and directions for enclosure.

PURE OTTO OF ROSE,

SPECIALITY OF

SHIPKOFF & CO.

DISTILLERS AND EXPORTERS,

KIZANLIK, BULGARIA.

Agent for Great Britain—G. P. BAKER, 19 Ivy Lane, LONDON, E.C.

THE OTTO OF ROSE which this house distils and exports is known above all by the absolute purity of its quality and the unexcelled sweetness and strength of its odour. It is guaranteed to be the finest essence produced in the famous Rose Valley of Bulgaria.



The Reservoir attached to the Brush is simply and quickly filled with water or any other liquid. Additional Brushes if required. Plain White, 13/6 per dozen; Coloured Enamelled Reservoir, superior Brush, 17/ per dozen, in fancy boxes.



Silver Plated—Tea size, 3/9; Dessert, 7/6; Table, 11/ per dozen, on cards.

GOAD & COMPANY, 42 Moorfields, Moorgate St., London.

IMMENSE SALE.

SOLD EVERYWHERE.

WOODS' ARECA NUT TOOTH PASTE,

As used and recommended by Madame Marie Roze, the Prima Donna.

PRICE, 6d. and 1s. per Pot.

CAUTION.—SEE "WOODS, PLYMOUTH," ON EACH POT.

BRECKNELL'S SPECIALTIES.

BRECKNELL'S SKIN-SOAP.—Prize Medal.

Recommended by Eminent Medical Men, and is the best for producing a clear and healthy skin.

BRECKNELL'S SADDLE SOAP.—Prize Medal.

Highest Testimonials as to its Superiority. The best article in use for the purpose.

BRECKNELL'S HARNESS COMPOSITION.

Strongly approved and recommended. Gives Black Harness a good appearance, and preserves the Leather.

BRECKNELL'S SOAP-CREAM PASTE.

An excellent and agreeable article for cleaning and improving the appearance of Brown Leather Boots. Made specially for the purpose.

BRECKNELL, TURNER & SONS,

(TO HER MAJESTY, &c.,)

31 HAYMARKET, LONDON, ENGLAND.

BEDFORD'S "SWEET HONEYSUCKLE" TOOTH PASTE.

In elegantly Decorated Pots, half a dozen in a Cartoon Box.

Should be shown in every Pharmacy. Sells at sight.
The most Perfect Tooth Paste ever introduced to the Trade.
ONE SIZE ONLY, 1/; 6/6 PER DOZ.

Mr. QUELCH regrets the unavoidable delay in the execution of orders, owing to the great demand. From this date prompt execution of all commands may be relied upon. Chemists who have not already stocked this line should do so at once.
"SWEET HONEYSUCKLE" SHAVING CREAM will be ready shortly.

Orders may be sent through any Wholesale House, or to the Sole Agent for the United Kingdom—

HENRY C. QUELCH, 19 LUDGATE HILL, LONDON, E.C.

Sole Agents for the United States—E. FOUGERA & Co., 30 North William Street, New York.

DR. RENNER'S ESTABLISHMENT FOR VACCINATION WITH CALF LYMPH,

186 (late 228) Marylebone Road, London, N.W.

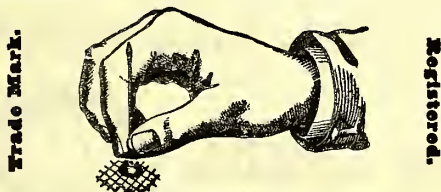
VACCINATION FROM THE CALF DAILY FROM 11 TO 12 O'CLOCK.

Reduced price of Calf Lymph (daily fresh).

Tubes	Large	---	---	2s. each, or 3 for	5s. 6d.
	Small	---	---	1s. " "	2s. 9d.
Points	Large	---	---	1s. " "	2s. 6d.
	Small	---	---	9d. " "	2s.
Squares	---	---	---	2s. 6d. each.	

Registered Telegraphic Address—"VACCINE LONDON."

Sent on receipt of remittance addressed to the Manager of the Establishment. Discount to the Trade.



THE
ASSOCIATION for the SUPPLY of PURE VACCINE LYMPH,
12 FILL MALL EAST, LONDON, S.W.

SOLE AGENTS FOR DR. WARLOMONT'S CALF VACCINE.

Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 5s.
HUMAN VACCINE, from healthy children only, microscopically examined and source quoted. Tubes, two-thirds full, 1s. 6d. each; Tubes one-third full and Lancet-charged Points, 1s. each; Pin-points, 1s. 1d. each. Eighteen charged Small Points, 6s. Tubes, two-thirds full (same as those mentioned above, but without source), in quantities for export, £5 per 100 Tubes. Pin-points uncharged, 1s. per dozen. Vaccine Injectors 1s. 3d. each, including postage. Vaccinations by appointment. P.O.O.'s (including postage, and crossed London and Westminster Bank), with orders, payable to
EDWARD DARKE, Secretary
Office hours, 10 to 4. Saturdays 10 to 2.

A LOVELY BATH and TOILET WATER

Obtained by using PASTA MACK.

GOLD MEDAL, Hygienic Exhibition, Ostend, 1888



This entirely new and Unrivalled Health-giving preparation SOFTENS the WATER instantly imparts A MOST DELICIOUS ODOUR, and Beautifies the Complexion in an extraordinary way.
See the Trade Mark on every box.

The Queen says:—"Pasta Mack is made in small tablets, which are pleasantly scented, and when placed in water soon dissolve, and impart a violet-like perfume to the water and the atmosphere."

Sole Manufacturer and Inventor, H. MACK, Ulm a/D. Export from all wholesale houses. Wholesale Agents, OSBORNE, GARRETT & CO., London, W.

SEABURY'S SURGEON'S RUBBER ADHESIVE PLASTER

Strong cotton cloth, 7 in. wide—yards, 17/; 5 yards, 78/ per doz.
Twilled linen, 6 " " " 24/; 5 " 138/ " "

Plain or Porous.

Moleskin, 6 in. wide—yards, 48/; 5 yards, 216/ per doz.
10-yard spools, { 1 1 1 2 2 3 in. wide.
plain. { 18/ 24/ 30/ 40/ 50/ 60/ per doz.

SUBJECT TO DISCOUNT.

Sole Manufacturers—

[2]

SEABURY & JOHNSON,

46 JEWIN STREET, LONDON, E.C.

NEW YORK. MONTREAL. HAMBURG

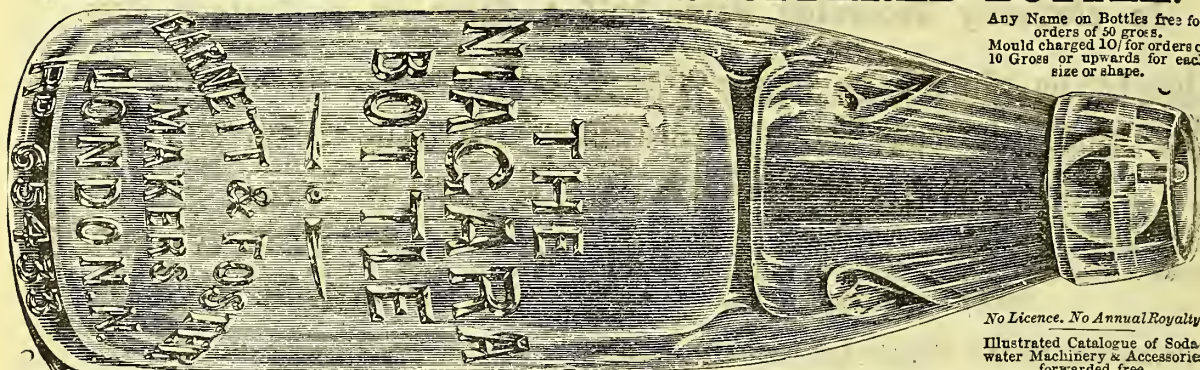
THE DIAMOND MARK.

To secure the best Hungarian Aperient Water

DEMAND THE DIAMOND MARK,

And insist upon receiving the HUNGARIAN APERIENT WATER sold by the APOLLINARIS COMPANY (LIMITED), LONDON.

OF ALL DRUGGISTS AND MINERAL WATER DEALERS.

THE "NIAGARA" GLOBE-STOPPERED BOTTLE.

Any Name on Bottles free for orders of 50 gross. Mould charged 10/ for orders of 10 Gross or upwards for each size or shape.

No Licence. No Annual Royalty. Illustrated Catalogue of Soda-water Machinery & Accessories forwarded free.

Present Prices :- { 5 oz. 7 oz. 10 oz. 12 oz. 14 oz. 16 oz. }
15/6 18/6 18/0 18/6 19/6 20/6

At our Works.

Hunslet, Leeds, YORKSHIRE.

EXTRA RINGS, 1/8 per Gross.

SEND FOR SAMPLE AND COMPARE

ORDERS TO BE SENT TO

BARNETT & FOSTER,

Mineral Water Engineers, Manufacturing Chemists, and General Providers to the Aerated Water, Wine, Beer, and Cyder Trade.

"NIAGARA WORKS," 26^T EAGLE WHARF ROAD, LONDON, N.

GOLD MEDAL, Amsterdam, 1883. DIPLOMA OF HONOUR, Paris, 1887.

GUÉRET FRÈRES,

MACHINISTS, PATENTEEs,

PARIS—72 BOULEVARD DE LA GARE, 72—PARIS.

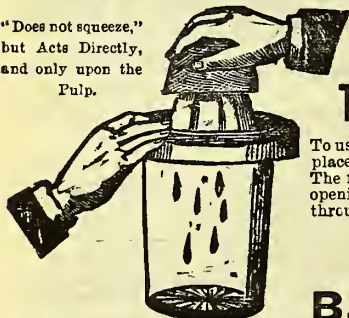
SYPHONS WITH SHORT LEVER, with Metal Tops of Pure Tin, carefully mounted, and the glass of the *first quality*.GAZOSELTZ, for the instantaneous production of Aerated Beverages at table. Anyone can use them."CONTINUOUS PROCESS" Apparatus complete, guaranteed without flaw in construction, possessing perfect action, and tested to a high pressure, while fulfilling every desirable condition of economy and sanitation.

OUR GENERAL CATALOGUE AND PRICE LIST WILL BE SENT FREE ON APPLICATION.

SELLING IN THOUSANDS BY CHEMISTS EVERYWHERE.

THE WORLD'S BEST LEMON SQUEEZER AT 6D. & 1/2.

"Does not squeeze," but Acts Directly, and only upon the Pulp.



This Lemon Squeezer is to the old-fashioned article what the Railway Carriage is to the Stage Coach.

THE "MODERN" LEMON SQUEEZER.

To use it, set the squeezer upon a tumbler, as shown by the accompanying illustration, place a half lemon upon the points, press downward, and rotate the lemon slightly. The ribs easily enter the pulp, the juice as it is liberated passes down through the openings into the tumbler; these openings are too small to allow the seeds to pass through.

A SAMPLE DOZEN SENT POST FREE ON RECEIPT OF 4s.
Price for Large Quantities on application.**B. & E. M'HUGH & CO., BELFAST, IRELAND.**

Patents taken out for India, Canada, Victoria, Australia, Queensland, New Zealand, Cape Good Hope; also Austria, Belgium, France, Germany, Italy, Norway, & Spain.

146 MINORIES, LONDON E.C.
New York
Sydney

SODA WATER MACHINERY
AND ALL ACCESSORIES FOR THE TRADE

BRATBY & HINCHLIFFE
HEAD OFFICE
SANDFORD ST., ANCOATS, MANCHESTER

BOXES BOTTLES MACHINERY
ESSENCES
Catalogues Circulars Testimonials
Post Free



SYPHONS & SELTZOGENES

GREAT REDUCTION IN PRICE.

We have recently been entrusted with a most important Agency for the above-named goods. Our Principals are the best known firm in Paris, and the Syphons are undoubtedly the cheapest and strongest in the market. The tops are made of pure English Tin, guaranteed free from lead. The Seltzogenes are made on the well-known "Fevre" system, and each one is thoroughly tested before being sent out.



WE CAN GIVE TO LARGE AND SMALL BUYERS EXCEPTIONALLY LOW PRICES.
PLEASE WRITE US AT ONCE FOR PRICES, STATING QUANTITY OF EACH KIND REQUIRED.

SODA-WATER MACHINERY.

MELBOURNE EXHIBITION, 1889, UNPRECEDENTED SUCCESS.

We have obtained at the above Exhibition

3 HIGHEST AWARDS POSSIBLE

A feat never accomplished before by any other house supplying requirements for the Aërated Water Trade.

These awards will carry with them **THREE GOLD MEDALS**, which were awarded as follows:—

- 1st—SODA-WATER MACHINERY (Highest Award possible).
- 1st—ESSENTIAL OILS & FRUIT ESSENCES (Highest Award possible).
- 1st—PATENT AND ORDINARY BOTTLES (Highest Award possible).

WRITE FOR NEW ILLUSTRATED CATALOGUE, POST FREE.

BRATBY & HINCHLIFFE,

Aerated Water Engineers and Glass Bottle Manufacturers,

SANDFORD ST., ANCOATS, MANCHESTER,

And at 146 MINORIES, LONDON, E.C.

ONLY PRIZE MEDAL

INTERNATIONAL FOOD EXHIBITION LONDON 1881

LONDON 1881

TELEGRAPHIC ADDRESS

RUBINE LONDON

HIGHEST PRIZE MEDAL

BRADFORD 1882

PURE WATERS

GOOD AERATION

CHEAP PRICES

PURE TIN TOPPED OR SILVERED

SYPHONS

CHEMISTS & HOSPITALS ONLY SUPPLIED

PROTECTION FROM COMPETITION OF STORES, GROCERS, WINE MERCHANTS &c.

PRICES & SAMPLES OF SYPHONS OR BOTTLES SENT FREE

THE CHEMISTS' AERATED AND MINERAL WATERS ASSOCIATION LIMITED.

45 GIFFORD ST. LONDON.

MONTPELLIER WORKS, STARBECK, HARROGATE.

SUN FACTORY, BRISTOL.





PASCALL'S GOLDEN MALTEX

PATENTED.

Contains 25% of Allen & Hanburys' Extract of Malt.

A NOVEL CONFECTION. — MOST SALEABLE.

Delicious Flavour. Brilliant and Attractive Appearance.

SELLS AT SIGHT.

Vide Dr. Tanner's Report, and The Chemist and Druggist, April 20th.

1/- Bottles, 9/- per doz.; 1-lb. Bottles, 22/- per doz.; 1-lb. Tins, 20/- per doz. and in 4-lb. Jars, 1/6 per lb.

OF ALL WHOLESALE HOUSES, OR OF THE MANUFACTURER,

JAS. PASCALL, BLACKFRIARS ROAD, LONDON, S.E.

THE KAISER'S COCOA.

MEAT. PEPTONE. COCOA.

This Preparation of Cocoa and Peptonised Meat Extract forms one of the most powerful concentrated foods known; it is indispensable to invalids, a boon to the healthy, and to those of a weak digestion. From its richness in nitrogenous principles (21 per cent.), it contains all the elements of tissue muscle, and blood formation, in a form ready to be assimilated at once, being predigested. In Powder for Breakfast, &c., or in Tablets.

As taken by the late EMPEROR FREDERICK on the recommendation of Dr. Leyden.
PERFECT FLAVOUR. NO OBJECTIONABLE TASTE. EASILY DIGESTED.

Price 1s. 6d. per Tin. "The article is in every way of satisfactory quality."—*British Medical Journal.* Price 1s. 6d. per Tin.

Sole Agents—SCHEIBLER BROS. & CO., 23 New Broad St., E.C.

THE CHEMIST & DRUGGIST

SUPPLEMENT.

Businesses Wanted.
Businesses for Disposal.
Premises to Let.
Auction Sales.

SATURDAY, AUGUST 3, 1889.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

This Supplement will be given free to any Chemist and Druggist or Assistant who will call for it at 42 Cannon Street on Friday afternoon, or will be posted on Fridays to any one who sends an addressed postal wrapper.

OFFICES: 42 CANNON ST., LONDON, E.C.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

The business conducted by Messrs. ORRIDGE & Co. has been known as a Transfer Agency since the year 1846, and is well known to all the leading firms in the Trade. VENDORS have the advantage of obtaining an opinion on value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

1.—**LONDON.**—Good ready locality; Retail, Dispensing, and Prescribing, with Wine Agency attached; returns £1,450; large shop, well fitted and heavily stocked; about £900 required.

2.—**LONDON, EAST.**—Good-class profitable Retail and Dispensing Business; returns under manager £795; business can be much increased; well-fitted shop and good stock; about £700 required.

3.—**NOTTING HILL.**—Locality; first-class Retail and Dispensing Business; returns £789; well-fitted shop, and good house; price £650, £400 on entry, remainder by instalments.

4.—**LONDON, NORTH.**—Main road; good business locality; profitable Retail and Dispensing; returns last year £500; well-fitted shop, and large stock; about £500 required, or offer.

5.—**LONDON SUBURB, W.**—Attractive locality; good-class Retail; receipts nearly £800; well-fitted shop and good stock; about £750 required.

6.—**STAFFORDSHIRE.**—Good Family, Retail, and Prescribing trade; receipts over £1,100; well-fitted shop, and good stock; large and commodious house; price about £750; full particulars on application.

7.—**SOUTH DEVON.**—Main and Branch Businesses for immediate disposal; gross returns nearly £700, increasing; both shops well fitted, and good stocks; price for the two businesses £455.

8.—**YORKSHIRE.**—Good business town; middle-class Light Retail; no heavy trade; returns last year over £550; well-fitted shop and good stock; good house, &c.; about £450 required, or valuation if wished.

9.—**SUSSEX.**—Good town; first-class Retail and Dispensing Business; returns £550; good prices for everything; well-fitted shop, and good stock; price about £500.

10.—**WORCESTERSHIRE.**—Good-class Retail and Dispensing, with small Wholesale; returns nearly £2,000, with good profits; handsome shop and good stock; large house, very convenient; price about £1,750, or valuation.

11.—**STAFFORDSHIRE.**—Retail and Dispensing, with good sale of proprietaries; returns £1,000; the shop is fairly-fitted; good stock; terms £250, goodwill and valuation.

12.—**SOMERSETSHIRE.**—Light Retail and Dispensing, with good-class trade; established over 30 years; returns average £934; shop has double-front, and well-stocked; good house, garden, &c.; about £700 required.

13.—**SUSSEX.**—General Retail, Dispensing, and Prescribing; returns under manager about £400; capable of great extension; well-fitted shop and good stock; convenient house, flower-garden, &c.; about £400 required.

14.—**SURREY.**—Good town; Retail and Dispensing Business, held by vendor many years; returns under indifferent management £450; vendor, having other engagements, will accept small premium and valuation.

15.—**WORCESTERSHIRE.**—Old-established Mixed Business; returns nearly £800, with good profits; shop well-fitted and good stock; convenient house, contains 8 rooms; good garden, greenhouse, &c.; vendor, having purchased a larger business, will accept reasonable offer.

16.—**HANTS.**—Attractive locality; very profitable Business; Retail, Dispensing and Prescribing; returns nearly £600; large house, good garden, &c.; about £600 required; part can be paid by instalments.

17.—**SUFFOLK.**—Good market town; Retail, Dispensing and Prescribing Business, with P.O. attached; shop well-fitted, and good stock; large house, &c., attached, with good garden; price to be arranged.

18.—**CATHEDRAL TOWN, WEST.**—Dispensing and Retail; very good-class trade; corner shop; returns £600 yearly; profits very good; house is roomy and convenient; rent low; price £600.

Re SARGENT, TAUNTON.

Messrs. ORRIDGE & CO. are instructed to accept an offer for this old-established Business at a **discount of 20 per cent.** from the amount at which the Stock and Fixtures may be valued at the time of sale. Applications received not later than August 10.

Particulars of any of the above will be furnished on application.

N.B.—NO CHARGE TO PURCHASERS.

Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

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EAST LONDON.—Capital opening; paying a profit first month; open evenings only; £50 or offer; much less than cost; vendor must sell.

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£3,000 RETURNS.—London; Retail, with Surgeon's Wholesale; net profit £700; price about £2,000; applicants enclosing references can have further particulars.

£520 RETURNS.—S.W.; Light Retail and Dispensing; full prices, large profits; energetic man can double; exceptionally good house; price £350.

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NORFOLK.—Ready-money Retail with local Wholesale; returns under assistant £850, has done £1,200, and can again with personal attention; price £500, or valuation of stock and fixtures.

CORNWALL.—Light unopposed Retail; returns £450, increasing; appointment nearly pays rent and taxes; price £250.

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3s. 6d. for fifty words; 6d. for every 10 words beyond.

35 GUINEAS.—Good opening for Chemist, in large town, 20 miles from London; small house, rent £25; exceptional opportunity; above amount will be accepted for fixtures. Apply, A. B., 23 Speenham Road, Stockwell, S.W.

£700 RETURNS.—Old-established genuine Chemist's Business, in a prosperous city in Midlands; Dispensing, good Proprietaries, and Light Retail; price £550 or valuation. "Princes," care of Messrs. Wileys & Co., Coventry.

LIVERPOOL.—Business for sale, owing to ill-health of proprietor; well suited for a beginner; in energetic hands could be made to yield a good return on the outlay; cash price £80. Address, "Lloyd," care of A. & S., 149 Duke Street, Liverpool.

TO CHEMISTS.—For immediate disposal; situated in the main road, London, S.E.; a genuine ready-money Business; long lease; low rent; illness sole cause for selling; in present hands 12 years. Apply, A., Messrs. Davy, Yates & Co., 64 Park Street, Southwark, S.E.

QUEENSLAND.—Old-established Business in good coastal town; returns last year over £1,500; good profits, small expenses, no opposition; price, stock, fixtures, and goodwill, £1,800. Apply, 58/64, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MIXED Drug and Stationery, in pretty village 4 miles from rail, but soon to have station on main Metropolitan extension; nearest chemist 4 miles; house and garden on lease; long established, but having been neglected will be sold for price of stock and fixtures, about £150. "Fides," 60 Queen's Road, Watford.

CHEMIST'S Business, with Photographic department, including about 20,000 negatives, on sale; the finest shop, in centre of good business town, near Manchester; good class of Drug business, and good returns; a fine opportunity for a good man with moderate capital. Address, A. 30, Woolleys & Co., Chemists, Manchester.

DEVON.—St. Mary Church, one mile from Torquay.—A small Branch Business, Light Retail and Dispensing; good house and shop; rent £27; the business has been managed by female; could be considerably increased by personal attention, also by adding a mixed trade; open and healthy situation; price about £150. Apply to Proprietor, 50 Union Street, Torquay.

TO BE LET, an old-established Chemist and Grocery Business, in consequence of the serious illness of the proprietor; best position in a market town; shop well fitted; stock about £400; terms easy. Apply, Mr. Elmitt, Horncastle.

GENTLEMEN who have about £400 cash, and who wish to purchase a genuine Retail and Dispensing Business, can do so on very advantageous terms by applying by letter to E. Hart, 2 Alexandra Terrace, Green Lanes, Noel Park, N.

CHEMIST'S Business for immediate disposal; well fitted; fine position and splendid prospects; energy only required; important town in the North; price £250—not the value of stock and fixtures. "North," office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

KENT.—A good-class Country Business for disposal, in a beautiful and healthy village 50 miles from London; shop well fitted and stocked, plate glass, double-fronted; in present hands 15 years; average returns £600; price £550; comfortable house, private entrance. Apply to Vinson & Feaver, Hawkhurst. No Agents.

THIRTY MILES from town; genuine cash Retail and Dispensing Business, in best position of rapidly rising town; double-fronted shop, well stocked and fitted; comfortable house, garden, warehouse, and stable; rent £35; returns £560, full prices; price £520; open to offer. "Veracity," Messrs. Davey, Yates & Co., 64 Park Street, Southwark.

BERKS.—Important market town; a light Retail trade, capable of being doubled; present turnover £400; plenty of scope for increase; large house at a moderate rental; handsomely fitted shop; good stock; price £325, or offer; only requires seeing. For particulars address, M. H. C., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

£250 cash will purchase a genuine Light Retail Business, returning £650, with £250 net profit after paying all expenses; situated in a good town, South of England; low rent; 9-roomed house; taken larger business; price £350; £100 to remain; trial allowed. "Hants," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

GLAMORGANSHIRE.—For immediate disposal, good-class Dispensing and Shipping trade; established three-quarters of a century; over 30 years in hands of present proprietor; returns nearly £1,200; very large profits; best position in the town; full particulars to bona-fide applicants with not less than £500 cash. Mr. Thurgood, 41 Wind Street, Swansea.

EXCEPTIONAL Opportunity.—Medical man wishes to transfer Retail to a young, energetic, qualified Chemist; stock and fixtures £125; premium for goodwill nominal; business is within a 20-mile radius of London; opened a few months ago; cash takings average £4 10s. weekly; every assistance given in developing business, and part payment may remain on good security. Address, M. D., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SOUTH COAST.—For immediate transfer; going abroad; good-class Retail, Dispensing, and Prescribing Business; returning £1,500, all cash and very profitable; large double-fronted shop, well fitted and stocked; best position in the town; good house; will accept valuation of stock and fittings, about £700; splendid chance to energetic man of business; quick sale being necessary, only those meaning business and having the cash need apply to "Cubeb," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

GLOUCESTERSHIRE.—In one of the best corner positions of a fashionable town, a high-class Dispensing and Retail Business; full prices, and very large profits; one Proprietary Article (registered) last year made a net profit of £120, without any advertising; letter orders received from all parts of England, and recommended by the medical profession; also many other popular proprietaries with an increasing sale and large profits; returns £950, and increasing; a fair valuation; proprietor retiring. Apply, in first instance, to "Primus," Messrs. Orridge & Co., 32 Ludgate Hill, London.

APPRENTICESHIPS.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

APPRENTICE.—E. H. Griffiths, Kidsgrove, Staffs, requires an Apprentice; premium small.

APPRENTICESHIP.—Wanted, a respectable, well-educated youth as an Apprentice; premium required. Apply, W. G. Blyth, Aire Street, Goole.

AS Apprentice, a well educated youth, in a fashionable seaside town in South Devon; good mixed business; moderate premium required; comfortable home. Apply to J. J. O. Evans, Dispensing Chemist, Teignmouth.

WANTED to place as Apprentices (indoors) two well-educated sons (twins), 17 years, where one or more assistants are kept; just passed their Preliminary; Nonconformists and Wesleyans preferred, within 30 miles or so of Blackburn. Address, Wm. Butterfield, Chemist, Blackburn.

TO LET.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

HOUSE and Shop, at 523 King's Road, Chelsea; just suited for a Chemist; no opposition: thickly-populated neighbourhood. Address, Mrs. Fairhall, 527 King's Road, Chelsea.

SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, an Assistant, about 24 years of age. Apply, J. Burton, Chemist, Llandudno.

INVOICE Clerk for Wholesale House. Address, with age, experience, and salary required, to "Statim," 12 Bride Lane, London.

WANTED, at once, an Assistant to manage a small Chemist and Stationer's Business. Full particulars to J. Hart, Painswick, Stroud.

MESSRS. BATTLE, SON & MALTBY, Wholesale Druggists, Lincoln, have a vacancy for a Junior Assistant. State age, reference, &c.

JUNIOR or Improver, indoors, for good class country business; short hours; also an Apprentice. Apply, R. A. Metcalf, Fakenham, Norfolk.

JUNIOR Assistant, under senior; outdoors; no Sunday duty; active and good at counter. Apply to W. D. Gibb, Chemist, Piazza, Winchester.

FOR a few weeks; an active Junior, about 20, for a small Retail Business; outdoors preferred. State full particulars to W. Gill, Chemist, Nottingham.

QUALIFIED Assistant: to take charge of Dispensing department. State age, height, salary required, and enclose photo, S. Wand, Chemist, Leicester.

LOCUM-TENENS wanted immediately, to take charge for a fortnight: good references indispensable. Particulars to John R. Marten, 40 London Road, Brighton.

IMMEDIATE.—Energetic Assistant; about 30; capable of taking entire management: qualified; indoors. Apply, W., care of Lewin & Co., 28a Basinghall Street, E.C.

WANTED, qualified Assistant to take charge of Dispensing department; state age, height, salary required, enclosing references and photo. R. Sunner, Chemist, Cork.

WANTED, at once, an Assistant (outdoors) as Dispenser, for three months. State age, experience, and salary required to G. W. Hobson, St. Ann's Pharmacy, Buxton.

WANTED, a competent Assistant in a light Retail and Dispensing Business; state age, salary required, with references. Address, H. T., 2 and 4 Woodstock Road, Oxford.

TO Chemists' Assistants.—Wanted, a Young Man, about 21. Apply, stating age, height, experience, references, and salary (outdoors), to Markham & Co., Market Place, Darlington.

A JUNIOR Assistant or Improver for a Mixed country Family Business; must be of active habits and good address. Apply, with reference and photo, to W. G. Blyth, 33 Aire Street, Goole.

QUALIFIED Gentleman required as Locum-tenens, from Aug. 17th to Sept. 2nd. Must give unexceptionable references, and state age, experience, and terms, to Duck & Son, St. John's Square, Cardiff.

AN experienced Assistant (indoor), for South Coast Watering-place. State age, height, references, salary required, and enclose photo, to "Wilkinson," care of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

IMMEDIATELY, Junior Assistant: dispensing and general retail business; first-class references indispensable. Apply, with full particulars, carte and references, "Pharmacist," 1 Spital Street, Dartford, Kent.

WANTED, at once, for the Wholesale, a Junior or Improver; experienced in mixing, packing, &c.; £1 a week. Apply, stating age and full particulars, to "Chemist," Herbert & Co., Gervase Street, Peckham, S.E.

ASSISTANT as Senior, by Sept. 2nd: one with Minor qualification preferred; age not less than 23. Applicants please state height, experience, salary indoors, and enclose photo, Jeans & Co., 1 and 3 Broad Street, Pendleton, Manchester.

DISPENSER; wanted at once, a quick, accurate Dispenser; Minor qualification necessary; indoor; close at 7.30 p.m. and 2 p.m. Saturday; no Sunday duty. Apply personally, to John Barker & Company, 71 Kensington High Street, W.

DENTAL PUPIL.—Mr. Scott, Licentiate in Dental Surgery, Ramsgate, has a vacancy for a well-educated youth, to be thoroughly taught the Dental Profession in all its branches under principal; comfortable Christian home; premium required.

WALES.—Assistant wanted for General Retail and small Wholesale; accustomed to getting up stock and despatching orders, &c.; salary 25s. per week, outdoors; age about 24. Send full particulars to "Druggist," care of Messrs. Hearon, Squire & Francis, 5 Coleman Street, London.

STRAITS SETTLEMENTS.—Wanted, a thoroughly good, steady, and reliable Assistant, with every prospect of advancement; duties principally dispensing. Apply, either personally, before noon, or by letter, to Messrs. Fletcher, Fletcher & Stevenson, North London Chemical Works, Holloway, N.

WANTED, in a Private Surgery, about August 18, a Dispenser; a Chemist preferred; aged 23 to 30; a comfortable situation, indoors; salary £35. Apply, if possible personally, before 11 or after 6, 60 Cambridge Gardens, Ladbroke Grove Road, W. Applications not answered in three days declined.

SENIOR wanted for a Drug business in London; must be a smart, active, thorough business man, and have Minor qualification; outdoors; no one need apply who does not require a permanent situation. Write in first instance to C. F., 60 St. Helen's Gardens, St. Quentin's Avenue, North Kensington.

IMMEDIATELY, Junior Assistant, aged about 21, well up in Dispensing and good-class Retail, able to prescribe, and left in charge occasionally during temporary absence of principal. Apply, stating age, height, salary, reference (last employer), when disengaged, with photo, to John Lea, Folkestone.

WANTED, a Registered Chemist; used to Mixed Country Business and Post Office preferred, and thoroughly competent to take entire management; one who has had experience with good pushing firm and can furnish highest references may commence duties at once. Address full particulars, and salary expected, "Chemist," 64 Falsgrave Road, Scarborough.

MANAGER (qualified by examination) wanted to take charge of a small business, and work it up; must be good counterman and dispenser, civil and obliging, and of temperate habits; age about 30; salary £2 per week (outdoors); good London references indispensable; personal application. Apply to C. W. Austin, 35 Brewer Street, Regent Street, London, W.

MESSRS. BUNCOMBE & CO., Allahabad, require the services of a competent Chemist to take the management of the whole of their business; he must be thoroughly qualified, energetic, a neat writer, a good correspondent, of strictly sober habits, and able to produce unexceptionable references; gentlemen with these qualifications are requested to write, with full particulars; photographs and copies of testimonials may be enclosed.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

OUTDOOR Assistant for Mixed Retail. Wilson, St. Helens.

ASSISTANT in good Dispensing establishment; Minor; aged 22, J. S. Hepworth, Hyde.

ASSISTANT; aged 27; disengaged; outdoors London. C. L. 395 Kennington Road, S.E.

ASSISTANT; 23; first-class experience. "Cherrius," 37 Clifford Street, Oxford Road, Manchester.

ASSISTANT; aged 25; abstainer; experienced. "Chemicus," 17 Bedford Street, Hulme, Manchester.

LOCUM-TENENS; qualified; experienced; reliable; tall; teetotaler. Hall Roberts, Holbein House, Folkestone.

ASSISTANT; 21½; 6 years' experience; passed Prelim.; good references. Hugh Jones, Golcar, Huddersfield.

JUNIOR; aged 21½; nearly 5 years' experience; extractor; tall. Reply to Poulter, Five Oaken, Mortimer, Berks.

BRANCH MANAGER; successful experience; good reference; married. A. C., 57 Seaford Road, Seaford.

JUNIOR, or Dispenser to Surgeon; London; time for study. "Argles," 5 Market Place, Underhill Road, East Dulwich.

AS JUNIOR, in Mixed business; not afraid of work; aged 20; 5½ years' experience. A. Thornton, Curdworth, near Birmingham.

AS Temporary; aged 30; 14 years' town and country experience; disengaged August 12. Imric, Selleck, Chemist, Stourbridge.

A GENTLEMAN, Major qualification; aged 28; height 5 ft. 8½ in.; in or outdoors. E. G., Arlington Villa, Barrow-in-Furness.

ASSISTANT or Manage Branch; aged 31; single; unqualified; indoors and permanency preferred. Lumbus, Aston, Nantwich.

AS Improver; indoors; aged 19; height 5 ft. 6 in.; 3 years' experience; country not objected to. A. C., 1 Brondesbury Road, Kilburn.

WANTED, a Situation (Qualified) with a view to Partnership or Purchase; Southern counties preferred. Z., 27 Victoria Street, Whitstable.

MANAGER or Temporary; town and country experience; good Extractor and Prescriber; good references. M. W., Marlboro' Villa, Maidenhead.

ASSISTANT; experienced; Drugs, Dispensing, Stationery, Postal and Telegraph duties; take charge. W., Mr. Polden, West Street, Wath, Rotherham.

JUNIOR, aged 20, with some knowledge of the business, wishes engagement as Improver; time for study; London preferred. H., 12 Mossbury Road, Clapham Junction.

MANAGER or Assistant; temporary or otherwise; good Prescriber, Dispenser, and Tooth Extractor; 13 years in late situation; married; aged 40. 11 Hicks Road, Seaforth, Liverpool.

£12 per annum, and services given after 3 p.m. daily (London), for comfortable home, or 15s. per week taken outdoors; Minor; aged 35. "Pharmacist," *Lancet* Office, 423 Strand, W.C.

MINOR; aged 26; town experience; would arrange with chemist or surgeon as part time Dispenser or otherwise; nominal salary, wishing to attend lectures; total abstainer. "Cocaine," 18 Merrick Square, S.E.

LOCUM-TENENS.—Registered Chemist, good experience, appearance, and address, will be glad to communicate with gentlemen desirous of taking holiday; any part; now disengaged. "Scilla," Mr. Freeman, Long Stanton, Cambs.

WHOLESALE.—Wanted, Position of Trust, Management of Wets, Sundries, Warehouseman, or as Traveller; whole or part time. Full particulars from "Drugs," care of Mr. Mould, 53 Wellington Lane, Beverley Road, Hull.

TO Manufacturers, &c.—Experienced young man, leading Drug and Sundries house, Dublin, is anxious to procure Agency, Dublin district, or travel Ireland; direct reference, security; expects being in London during August. "Agent," care of Mr. West, 13 College Green, Dublin.

WANTED, charge of Manufacturing Laboratory, or responsible position in Wholesale; London preferred, but not essential; or would represent a good house; permanency desired; good experience; qualified M.P.S.; active and energetic; aged 29; height 5 feet 10 inches. J. Haddock, 22 Raleigh Road, Hornsey, N.

MISCELLANEOUS.

Special charges are made for Advertisements under this heading, which can be obtained on application.

STUDENTS' AIDS TO EXAMINATION.

PRELIMINARY.—Arithmetic and Metric System, 1s. How to Write an Essay, 3d. Caesar Simplified, 1s. Knotty Points in Latin Grammar, 1s. 6d. MINOR.—Equations Simplified, 1s. Illegible Autographic Prescriptions, 1s. Notes on Dispensing, 1s. Prescriptions given at the Minor, 6d. "Chemist," care of Mr. J. Edwards, Wye, Kent.

PRELIMINARY AND MINOR.

ALL Students who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. 32 Pupils passed the last Examinations.

GLYCERINE & CUCUMBER,

First Quality, 9d. per lb., by using

Rouse's Concentrated Cucumber Paste.

In Jars (free), ½ lb. 2s. 3d.; 1 lb. 4s. 3d. net.

Making 3 lbs. and 6 lbs., costing 1d. per oz., by simply adding Water and Glycerine.

Thro' any Wholesale House, or post free for P.O.

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Write for Illustrated Guide, "How to open respectably, £20 to £1,000," post free. "The Tobacconists' Outfitting Company (Registered)," (late H. Myers & Co.), 11 Beech Street, London, E.C. Largest complete Tobacconists' Furnishers in the world.

£20

OUR WEEKLY SUPPLEMENT.

We have prepared a set of forms for small advertisements (assistants wanted, businesses for disposal, Exchange column, &c.). With these are attached tables of useful reference matter (Sale of Poisons, Postal Information, Annual Licences, Metric Weights, Measures, Medicine Stamps, Law and Public Offices, &c.). We shall be glad to send one of these sets to any subscriber who will send us an addressed postal wrapper (bearing a halfpenny stamp). As the object of this production is to encourage the insertion of such advertisements as we have named in *THE CHEMIST AND DRUGGIST*, we hope this offer will be taken advantage of chiefly by those subscribers who are willing to use this journal whenever opportunities occur.

OFFICES: 42 CANNON STREET, LONDON, E.C.

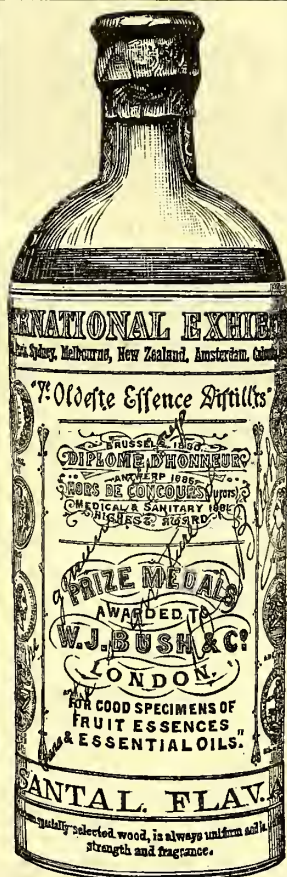
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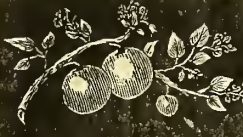
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Specially Selected.

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TO AERATED WATER MANUFACTURERS



HAY'S



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ARE GUARANTEED TO BE THE FINEST IN THE MARKET

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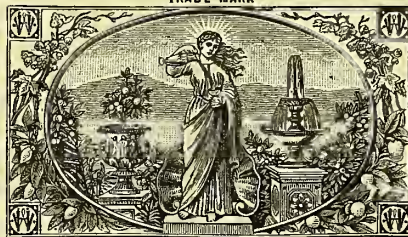
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A Pure Essence of the Finest Ginger.
Trade Price 5/ per lb.; 12 lbs. and upwards, 4/6.

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For First Quality Ginger Ale.
Trade Price 5/6 per lb.; 12 lbs. and upwards, 5/.

HAY'S GINGER ALE EXTRACT,
For Second Quality Ginger Ale.
Imparts Pungency, Colouring, great Brilliance, and an unusually Fine Ginger Flavour and Aroma.
Trade Price 4/6 per lb.; 12 lbs. and upwards 4/.

HAY'S GINGER ALE ESSENCE,
For Third Quality Ginger Ale.
This Essence makes a beverage that is unsurpassed by the so-called finest Belfast Ginger Ale.
Trade Price 9/ lb.; 12 lbs. and upwards, 8/6.

THESE ESSENCES
Have obtained the Highest Testimonials from all the Medical Journals, and from the Principal Trade Journals in this and other countries.



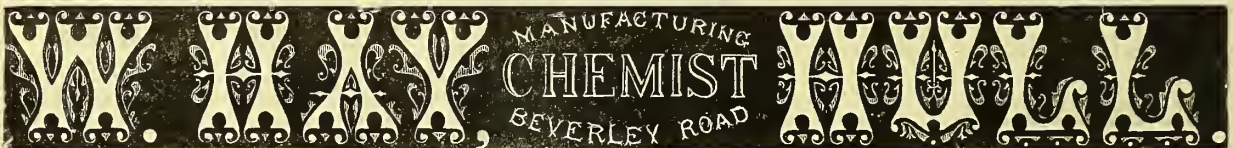
For ORANGE, VANILLA, and all other Essences.
SEND FOR PRICE LIST.

HAY'S HOP ALE ESSENCE,
For the manufacture of the Finest Aerated Hop Ales. This Essence is made from the choicest Hops grown, and is unrivalled for its peculiarly fine Hop Flavour and Aroma. Hop Ale made from this Essence has the full flavour of the finest Hops, and is a really appetising Bitter Beer.
Trade Price 8/6 per lb.; 12 lbs. and upwards 8/.

HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS,
No. 1. Highly Concentrated.
Trade Price 8/6 per lb.; 2 lbs. and upwards 8/.

HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS;
No. 2. Makes an exquisitely fine Lemonade.
Trade Price 8/6 per lb.; 12 lbs. and upwards, 6/

HAY'S LEMON FLAVOUR.
Imparts a Lemonade all the Fine Aroma and Flavour of the choicest Lemons.
Trade Price 5/ per lb.; 12 lbs. and upwards 4/6.



SUMMER BEVERAGES.

CITRATE MAGNESIA, 60/, 62/, 66/ cwt.
SALINE (Chlorated), 64/ cwt.
TONIC BEVERAGE, for the immediate production of Herb Beer, 80/ cwt.
LEMON KALI, or SHERBET, 40/, 44/, 48/ cwt.
RASPBERRY KALI, 56/ cwt.
LIME JUICE KALI, 48/ cwt.
In Bottles, 7, 4, 2, 1, and ½ lb., 3/ per cwt. extra.

TERMS—Carriage paid on cwt. parcels, net prompt cash 7 days after delivery.

T. E. BUTLER & SON,
41-57 Sanvey Gate, LEICESTER.

CHAS. SOUTHWELL & CO.'S

MANUFACTURES ARE GUARANTEED.

LIME JUICE CORDIAL.
GRANULAR EFFERVESCENT CITRO-TARTRATE
Commonly known as
CITRATE OF MAGNESIA.
PERSIAN SHERBET. FRUIT SYRUPS.
LEMON JUICE.
EXCELSIOR TABLE JELLIES,
IN CARDBOARD BOXES.
DRIED ORANGE PEEL FOR DRUGGISTS.

CHAS. SOUTHWELL & CO., Dockhead, LONDON, S.E.

MILLAR'S BRITISH WINES.

ORANGE (suitable for Quinine), GINGER, RAISIN, COWSLIP, CHERRY, &c.
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Sole Agents for London and District—H. J. ROYDANT & CO., 75 Acre Lane, Brixton. S.W

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(DOUBLE DISTILLED).

56 o.p. 18/9; 60 o.p. 19/3 per gallon. CASH WITH ORDER.
SPECIAL QUOTATIONS FOR QUANTITY, AND FOR EXPORT IN BOND. METHYLATED SPIRIT.

JAMES LESLIE & CO., DISTILLERS, BELFAST.

EIGHT PRIZE MEDALS AWARDED

GOODALL'S HOUSEHOLD SPECIALITIES.

YORKSHIRE RELISH.

Most Delicious Sauce in the World. Bottles, 6d., 1s., and 2s. each

GOODALL'S BAKING POWDER.

The Best in the World. 1d. Packets; 6d., 1s., 2s., and 5s. Tins.

GOODALL'S EGG POWDER.

One 6d. Tin is equal to 25 eggs. In 1d. Packets; 6d., 1s., and 5s. Tins.

GOODALL'S CUSTARD POWDER.

Delicious Custards without Eggs. In Boxes, 2d., 6d., and 1s. each

GOODALL'S BLANCMANGE POWDER

Delicious Blancmange in a Few Minutes. Boxes, 6d. and 1s. each.

GOODALL'S QUININE WINE, B.P.

Best Tonic yet Introduced. Bottles, 6d., 1s. and 2s. each.

GOODALL'S GINGER-BEER POWDER.

Makes the Best Ginger-Beer. Packets, 3d. and 6d.

GOODALL'S BRUNSWICK BLACK,

For Painting Stoves, Grates, Iron, Tin, &c. 6d. and 1s. Bottles

GOODALL'S LAVENDER WATER.

A Rich and Lasting Perfume. Bottles, 1s., 2s., and 5s. each.

GOODALL'S PLATE POWDER.

For Polishing and Cleaning all Metals. Boxes, 6d., 1s. and

GOODALL'S JELLY SQUARES.

Make a Delicious and Nutritious Jelly. In $\frac{1}{2}$ - and 1-pint boxes, 3d. and 6d. each.

PROPRIETORS—GOODALL, BACKHOUSE & CO., LEEDS.

PATENT MEDICINES

AND

DRUGGISTS' SUNDRIES.

Monthly Price List of Patent Medicines, Druggists' Sundries, &c., will be sent post free on application to

GOODALL, BACKHOUSE & CO., LEEDS.

TYRER'S SAUCES

GOOD
VALUE

AND

"BOROUGH" KETCHUP

THE GIANT 1d. BOTTLE OF SAUCE.
LARGEST IN THE TRADE.

In Half-Gross Boxes, at 6/6 per Gross.*

"BOROUGH" KETCHUP, WORCESTER, HARVEY, YORKSHIRE
OR READING SAUCE.

1d. Sample Bottles, dozen parcels	..	..	per gross 5/	extra quality 8/
1d. Giant Bottles, dozen parcels	..	..	6/6	8/
1d. Giant Bottles, dozen parcels	..	..	8/	8/
1d. Giant Bottles, dozen parcels	..	..	8/6	8/
$\frac{1}{2}$ -Bottles (flat or round), reputed $\frac{1}{2}$ -pint	..	..	16/	24/
$\frac{1}{2}$ -Bottles (flat or round), reputed pint	..	..	28/	32/
$\frac{1}{2}$ -pint Imperial Round Stoppered Bottles	..	..	30/	38/
1-pint Imperial	..	..	50/	60/
12 $\frac{1}{2}$ -gallon Casks (casks free)..	..	..	20/	32/

ROYAL CAFÉ SAUCE.

In 8-oz. square-stoppered bottles, 48/ per gross.
A rich, fruity Sauce of fine flavour, and worth especial attention, as being the most saleable in the market.

Samples of any kind Sent Free of all Cost by

PETER TYRER,
The "Borough" Ketchup and Sauce Maker,
70 LONG LANE, BOROUGH, LONDON, S.E.

SCOTCH AGENCY: WEST NILE STREET, GLASGOW,
Also Sold by W. & C. PANTIN, Upper Thames Street, LONDON, E.C.
BURGOYNE & CO., 16 Coleman Street, London, E.C.
JOS. TRAVERS & SONS, 119 Cannon Street, London, E.C.

A WONDERFUL SUCCESS!!

NON-INTOXICATING BEER

Made from MASON'S Original

EXTRACT of HERBS

(REGISTERED.)

Composed of Yarrow, Dandelion, Comfrey, & Horehound.
ENLARGEMENT OF SIZE.A Sixpenny Bottle makes EIGHT GALLONS of
HERB or BOTANIC BEERA NON-INTOXICATING BEVERAGE
Full of Body and Flavour, with a Creamy Head like Bottled Ale, the most perfect substitute for Alcoholic Drinks ever discovered, for either Summer or Winter.

BEWARE of mean and fraudulent imitations.

BEWARE of others copying our title.

MASON'S is the original and only genuine.

MASON'S is a Special Compound entirely from Herbs.

NO OTHER EXTRACT MAKES BEER LIKE IT.

Sold in Bottles at 6d., 1/, & 2/ each, with directions.

MASON'S WINE ESSENCES

Make Temperance Wines in a few minutes.

Ginger, Orange, Lemon, Raspberry, Black Currant, &c.
These are having a very large sale now, and are extensively advertised.

Sold in Bottles at 6d., 1s., and 2s. each.

Quotations on application.

SOLE INVENTORS &
MANUFACTURERS:

NEWBALL & MASON,
Manufacturing Chemists and Botanic Druggists, NOTTINGHAM

TOWER TEA

A MOST VALUABLE AGENCY.

REGISTERED.



Tower Tea

NOTE. These Trade Marks appear on every Package.

WHERE VACANCIES MAY EXIST, AGENTS ARE APPOINTED BY
THE GREAT TOWER STREET TEA COMPANY, LIMITED,
5 JEWRY STREET, LONDON, E.C.

SOLE MAKERS

PEPTONATE OF IRON

DENAEVER'S PEPTONES

PEPTONE OF MEAT

DENAEVER'S

LIQUID PEPTONES

STERILIZED

Free from microbes!
 Keep good for ever in all climates.
 113 BISHOPSGATE STREET WITHIN, LONDON, E.C.

DENAEVER'S PEPTONATE OF IRON. A bland, non-irritating and most easily assimilable ferruginous preparation. For debilitated constitutions, children, and aged people.
DENAEVER'S PEPTONE OF MEAT. A powerful restorative for all ailments of the stomach, stimulates general nutrition. Is retained when the stomach rejects all other food. Pleasant to taste.
 Of all Chemists and Wholesale Houses.

MADE INSTANTLY IN CUP OR TEAPOT.

A Digestive

SANTHA

Extract of Tea.

"The aroma and the caffeine are preserved, and the tannin is neutralised and rendered innocuous."—*Lancet*, May 4, 1889.

THE ONLY SAFE TEA FOR WEAK DIGESTION.
 In bottles, price 1/ and 2/6; Samples 6d. each. Wholesale Agents—**BARCLAY & SONS, Lim.**, Farringdon Street.
 * * A LARGE SALE MAY BE EFFECTED AMONGST DYSPEPTIC CUSTOMERS.

WILKINSON'S COMPRESSED HOPS

Best Hops compressed into small parcels of one pound and half-pound, and sent out in cases containing 30 lbs. each. These hops are specially selected and compressed for keeping purposes, and will retain their aromatic strength for a considerable time. They are introduced to the public to enable them to make their own **HOP BITTERS, YEAST, HOME BREWING**, and numerous other purposes. Full particulars given in each packet. Samples and Prices sent on application to

A. WILKINSON & SONS, 37 Canning Place, LIVERPOOL.

P.S.—Chemists will naturally see the great advantage in making their own Bitters from the Pure Hop itself.
 Dealers in every description of Isinglass.



ROBINSON'S LIEBIG'S BEEF WINE.

Composed of Liebig's Extract of Beef, Extract of Malt,
and sound Port Wine.

REPORT ON BEEF WINES.

From the results of my Analyses of various Beef Wines I have had occasion to examine, none have equalled as regards strength, purity of ingredients, and (of no less importance) the skilful and judicious manner in which the respective ingredients have been proportioned and combined, the Liebig's Beef Wine manufactured by Mr. B. ROBINSON, of Pendleton, Manchester.

It is in every sense a reliable preparation, embodying in a pleasing and palatable form all the acknowledged medicinal and nutritive properties pertaining to Liebig's Extract of Meat, Extract of Malt, and sound Port Wine.

WILLIAM ELBORNE, F.C.S., F.L.S.,

Lecturer on Materia Medica in the Owens College, Manchester (Victoria University).
December 15, 1888.

ROBINSON'S ORANGE WINE.

Specially prepared for Quinine Wine, does not deposit, will keep good in any climate, and well adapted for Export Trade. Supplied in Casks containing 9, 18, 30, 60, or 120 Gallons. Terms on application. [2]

PHARMACEUTICAL SHERRY WINE.

This Wine is well adapted for Pharmaceutical Preparations, and is the strength ordered by the B.P. Price, in 6-Gallon Casks, 5/6 per gallon; in 2-Gallon Jars, 6/- per gallon, carriage paid. Casks charged 7/6, Jars 2/6, and allowed if returned. Cash or satisfactory reference to accompany order.
B. ROBINSON, Distiller and Brewer of British Wines, Church St., Pendleton, Manchester.

MILK IN POWDER

PREPARED BY THE SWISS MILK CO., ST. GALL, SWITZERLAND.

UNSWEETENED OR SWEETENED.

The cheapest, purest, and most nutritious of all similar productions.

The Lancet says:—A very interesting and valuable preparation.

British Medical says:—The preparation represents the highest possible degree of concentration which can be obtained, and is sure to be appreciated.

The Medical Press says:—A milk which is with difficulty distinguished from fresh cow's milk.

London Office, 61 Mark Lane, E.C.

TOBACCO

CIGARS & CIGARETTES.

M. & R. PEACOCK,
Tobacco, Cigar, & Cigarette
Manufacturers,
KINGSLAND RD., LONDON, N.E.

Sole Manufacturers of the Celebrated
Brands—

"ROYAL CHARTER"

AND

"UPPER CRUST."

Sold in Packets only.

Those who deal in these Goods, or intend doing so, should write to the above Manufacturers for Price List.

"RAMORNIE."

LIEBIG'S

Extract of Meat.

As supplied to the War Office.

1-lb. Jars.....per lb.	6/2	.....per doz.	74/0	2-oz. Jars.....per lb.	7/0	.....per doz.	10/6
1/2-lb. Jars....."	6/4	....."	85/0	1-oz. Jars....."	7/8	....."	5/9
4-oz. Jars....."	6/7	....."	18/9	1/2-oz. Jars....."	8/0	....."	3/0

QUOTATIONS FOR EXTRA IN "BULK" ON APPLICATION.

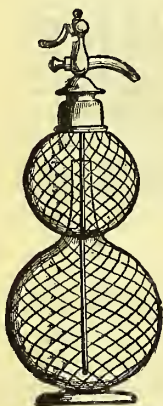
Write for Detailed Price List to the Australian Meat Co., 9 and 11 Fenchurch Avenue, E.C.

6 lbs. Carriage Free.

MAY, ROBERTS & CO.,
9 CLERKENWELL ROAD, LONDON, E.C.
 TELEGRAPHIC ADDRESS—"FEEDING BOTTLES LONDON."

ILLUSTRATED CATALOGUE, 1889,
DRUGGISTS' SUNDRIES, SURGICAL APPLIANCES,
PATENT MEDICINES, ETC., NOW READY.

POST FREE ON APPLICATION.



FEVRE'S
SELTZOGENES.

	2 PINT.	3 PINT.	5 PINT.	8 PINT.
Caned, each	7/	8/	12/5	20/9
	2 PINT.	3 PINT.	5 PINT.	8 PINT.
Wired, each	6/6	7/9	11/9	18/11

£2 worth or more, 5 per cent. discount.

MAY, ROBERTS & CO., 9 CLERKENWELL ROAD, LONDON, E.C.

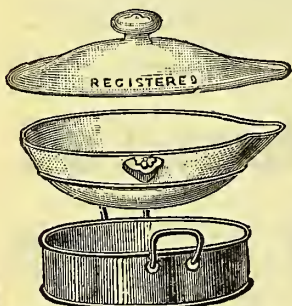
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LOOF AHS.

MAY, ROBERTS & CO. beg to inform the
 Trade that they have received a very fine parcel—from 16
 to 18 inches in length—which they will be happy to supply at
 4/6 per dozen, cut or uncut, as required.

9 CLERKENWELL ROAD, LONDON, E.C.

"MAY-ROBERTS" WATER BATH,
REGISTERED.



This Water Bath will supply a long-felt want amongst Chemists and Perfumers, where small quantities of materials have to be dealt with.

The old form of Water Bath necessitates the use of a second vessel for pouring the melted Pomade, Cream, or other substance into the bottles or jars in which they are sold. In the "MAY-ROBERTS" Water Bath the earthenware bowl can be lifted out of the tin containing the boiling water, the process of cooling being thereby very much expedited, and the contents can be poured into the bottles or jars direct from the bowl. The Bath is also supplied with an earthenware cover.

1 PINT.	5 PINT.	10 PINT.	[1]
Each 3/0	5/6	9/6	

MAY, ROBERTS & CO.
9 CLERKENWELL ROAD, LONDON, E.C.

Telegraphic Address—"FEEDING BOTTLES LONDON."

Telephone Number, 1852.

Telegraphic Address—CHEMICUS LONDON.

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Barnett and Foster
Cadbury Abbey Mineral Water
Chemists' Aërated Waters Association.
Ellis (Ruthin)
Hessall and Co. (Oitrio Acid Phospho)
Hay, W.
Idris and Co.
Jewsbury and Brown
Kilmind and Co.
Mills and Co. (Bourne)
Schacht, W., & Co. (Kronenquells)
Taylor, T., and F. J.
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DITTO PLANT

[See SYPHONS and ESSENCES.]
Barnett and Foster
Bratby and Hinchliffe
Favarger, H.
Fevre, T.
Gueret Freres
Tyler, Hayward, and Co.

ACETIC ACID

Dunn and Co.
Greiff, R. W., and Co.
Morris and Oallard (Salts)

ALKALOIDS

Howards and Sons (Oinebana)
Smith, T. and H.

AGNCIES ABROAD

Australian Drug Co.
Cocking and Co. (Japan)
Filton, Grimwade and Co. (Melbourne)
Fougera and Co. (New York)
Kempthorne, Prosser & Co. N.Z.
Lennon, B. G., and Co.
Levy, Julius
Macnaughtan, F. J.
Peaks, Allen and Co.
Petersen, P. J., and Co.
Prosser, Taylor and Co.
Rich, E. C., Co.
Roberts (Paris, &c.)
Rocks, Tompsett and Co. (Melbourne)
Soul, W. H., and Co.
APPARATUS
Clarke, S. (Food Warmer and Bed Tray)
French Nickel Manufacturing Co.
McHugh, B. and E. (Lemon Squeezers)
Orms (Scientific)
Parkin, Son and Rayment
Stokes, J. E., and Co. (Lim.) (Check Till)
Wadgwood & Sone (Mortare)

AMMONIA

May and Baker.
Whits, A., and Sons
Woolley, Sons and Co.

BAKING POWDER

Dunn, W. G., and Co.
Goodall, Backhouse and Co.

BANDAGES

Bailey, W. H., and Son
Robinson and Sons
Schutz, F., and Co.
Ssaby and Johnson

BATH GLOVES

Maw, Son and Thompson, S.
Pattison, G.

BEESWAX

Bowdler, W. H., and Co.

BICARB. SODA

Brunner, Mond and Co., Lim.
Gaskell, Dsason and Co.
Howards and Sone
May and Baksr

BISMUTH. PREP.

Hearon, Squires and Francis
Hewlett and Sons
Howards and Sons
May and Baksr
Synnes and Co.
Whits, Alfred, and Sons

BLOOD MIXTURE

Lincoln and Midland Counties
Drug Co.

BOOKS

Dr. Dobell
Gurney and Jackson
Hargreaves, Dr.
Pritchett, W. B.
Whits, W., M.D.

BOTANIC BEER

Newball and Mason

BOTTLES

Aire and Calder Bottle Co. (Ld.)
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Barnett and Foster
Barnett, B. H.
Bratby and Hinchliffe
Bremitt's (Lim.)
Evans, Sons and Co.
Fitch, W. B., and Co.
Hearn, E. A., and Co.
Hunt, W. F. (Capps)
Isaacs and Co.
Kilner Bros.
Lang, Jonas, and Co.
Lang, Jules, and Co.
Maw, Son and Thompson
Pothe, H., and Co.
Sanders, H. G., and Son
Shirley, A. W.
Taylor, E., and Co.
Taylor, G., and Co. (Limited)
Toogood
Youldon, E.

BRUSHES

Dukas and Co.
Goad and Co. (Tooth)
Moseley, David, and Sons
Sutton, O., and Co. (Toon)

BUTTER COLR. &c.

Oldfield, Pattinson and Co.
Tomlinson and Hayward

BOXES

Austin and Co. (Cardboard)
Ayrton and Saunders
Chalmers, W. B.
Noakes, E., and Co.
Owen, J., Jr.
Parsentier, I. W. & Co. Lim
Robinson and Sons

CAMPOR

Howards and Sons
Kessne and Ashwell (Homoeo-
May and Baker (pathic)

CAPSULES

Denonal, J. (Medicinal)
Duncan, Flockhart and Co.
Evans, Sons and Co.
Hooper, B., and Co.
Maw, S., Son and Thompson
Robertson, J., and Co.

CAPSULES

(METALLIC)

Betts and Co.
Melin, C. (Machins)
Sanders, H. G., and Son

CARMINE

Buch, W. J., and Co.

CSCRA SAGRADA

Duncan, Flockhart and Co.
Evans, Sons and Co.
Farris and Co.
Moss, J., and Co.
Squire and Sons

CATALOGUE

Evans, Sone and Co.
Maw, Son and Thompson, S.
May, Roberts and Co.
Sanger and Son
Thompson, Walters, Hole and Co. (Limited)

CRSHD LINSERD

Mumford, G. S.

CEMENT

Foulkes, W. J.

Kay Bros., Lim.

Mumford, R.

CHALK PRECIP.

Dunn and Co.

Levermore, Ang., and Co.

White, A., and Sons.

CHEMICALS

Andreas, Oscar and Co.

Boehm, F.

Branwell and Son

Brunner, Mond and Co., Lim.

Bush, W., Son and Co.

Dunn and Co.

Fletcher Fletcher and Ste-

venson

Fuerst Bros.

Gaskell, Deacon and Co. (Bi-

carbonate of Soda)

Goodall, Backhouse and Co.

Greiff and Co.

Hill, A. S., and Son

Howards and Son (Pharm.)

Kuhn, B.

Levermore, Ang., and Co.

Lofthouse and Saltmer

May and Baker

Morris and Callard

Moss and Co.

Prunk, Davis and Co.

Stern, G. and G. (Fumiline)

Smith, T. and H., and Co.

Typke and King

White, A., and Sons

Zimmermann, A. and M.

CHEST PROTECTRS

Bailey, W. H., and Son

Hockin, Wilson and Co.

Maw, Son and Thompson, S.

Sanger and Sons

Schutze, F., and Co.

Thompson, Walters, Hole and

Co. (Limited)

CHLORIDE OF GOLD

Rowland, L.

CHL. OF POTASH

Burroughs, Wellcome and Co.

Hooper, B., and Co.

CHLORIDE OF LIME

Government Sanitary Co.

National Chemical Co.

CHLORODYNE

Davenport (Browne's)

Freeman, E.

Towle, A. P., and Son

CHLOROFORM, &c.

Duncan, Flockhart and Co.

Macfarlan, J. F., and Son

Smith, T. and H., and Co.

Wright, Layman and Umney

Zimmermann, A., and Son

CITRIC ACID

Hassalls (Phospho)

COCAINE-HYDRO.

Howards and Sons

COCA WINE

Armbricht, Nelson and Co.

Evans, Sons and Co.

French Hygienic Soc.

COCOA & CHOCOLTE

Cadhury Bros

Fry and Sons

Rowntree and Co.

Schreiber Bros. and Co.

Van Houten's Cocoa

COD-LIVER OIL

Allen and Hanbury

Brekke and Howlid

Burroughs, Wellcome and Co.

Evans, Sons and Co.

Hill, A. S., and Son

Lofthouse and Saltmer

Oppenheimer Bros. and Co.

Smith, T. J.

Woolley, Sons and Co.

Wright, Layman and Umney

COFFEE

Symington and Co. (Coffee

Essence)

COLPSIBLE TUBES

Betts and Co.

Brooks, Peel and Co.

Sanders, H. G., and Son

COMPRESSED**MEDICINES**

Allen and Hanbury

Blyton, T. Bage, and Co.

Burroughs, Wellcome and Co.

Hooper, B., and Co.

Leo and Co.

Wyleys and Co.

CONFECTIONERY

Blyton, T. Bage, and Co.

Cepal Varnish Co. (Colours)

Gibson, R., and Sons

Kerfoot, T.

Pascall, J.

Warriock Brothers

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Evans, Sons and Co.

Fletcher, Fletcher & Stevenson

CORN CURES

Maw, Son and Thompson, S.

Robinson, B.

Seabury & Johnson (Plasters)

Solport Bros. (Plasters)

Thompson, M. F.

Young, H.

COTTON WOOL

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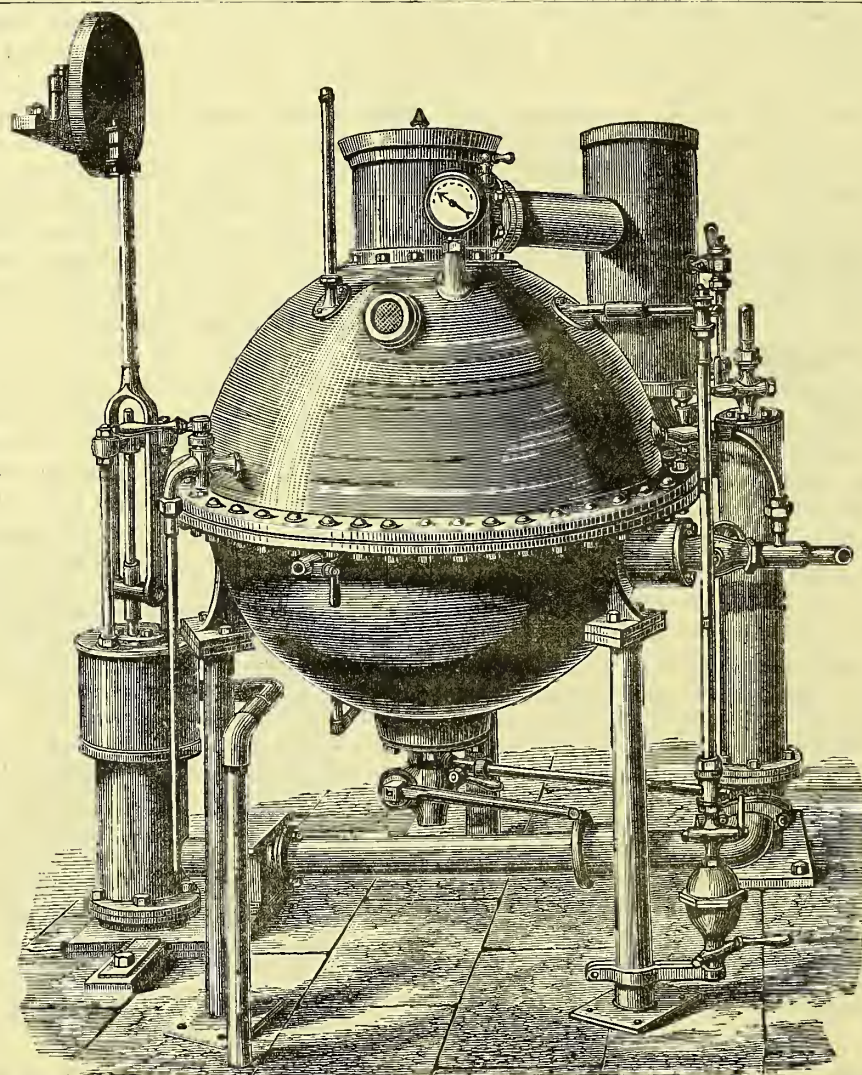
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ADVERTISEMENTS of situations vacant and wanted, businesses for disposal, &c., will be received by us up till the first post on Friday morning.

MR. HARRY V. DAKERS, our agent for the United States, has removed his office from Liberty Street to 24 Union Square, New York.

SUBSCRIBERS' ADDRESSES.—In order to ensure uninterrupted delivery of THE CHEMIST AND DRUGGIST to subscribers who may be changing their address, notice of such change should be received by the Publisher not later than Monday of the week in which the journal is to be sent to the new address.

THE PARIS EXHIBITION.—Our office in the Paris Exhibition is No. 9, the British Section of the Liberal Arts Gallery, where subscriptions can be paid or single copies purchased by persons connected with the drug trade. Our representative there, Mr. Lord, speaks French fluently, and will be pleased to render any assistance in his power to readers of THE CHEMIST AND DRUGGIST.

"THE HANDY BOOK OF MEDICINE-STAMP DUTY."

THIS work has been written for us by Mr. E. N. Alpe, of the Solicitors' Department, Inland Revenue Office, Somerset House, who has had a wide experience in and intimate knowledge of the administration of the Acts which regulate the sale of proprietary medicines. The Handy Book is, consequently, of exceptional value to chemists and druggists, more especially in showing how medicines are made liable to stamp-duty by labelling, circulars, and the like. Reviewers have been unanimous in stating that the work is not only complete, but interesting and invaluable. It is as free as possible from legal phraseology, is readable, and is nicely got up. Price 2s. 6d., or by post 2s. 9d. May be obtained through the wholesale houses in the same way as "The Art of Dispensing."

"THE ART OF DISPENSING."

Price 3s. 6d., or by post 3s. 10d. May be ordered along with ordinary goods from the principal wholesale houses, who supply it at the published price, 3s. 6d.

This book may be obtained in Australia from the offices of *The Chemist and Druggist of Australasia*, Fink's Buildings, Melbourne, and 13 Queen's Chambers, Sydney, price 5s.

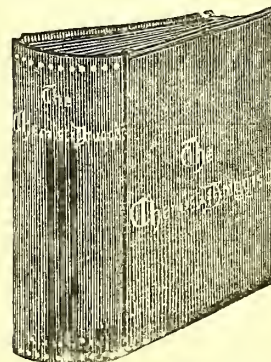
Our agent in New York, Mr. Harry V. Dakers, 24 Union Square, will supply "The Art of Dispensing" to American pharmacists at \$1.25 per copy, post free.

"The Art of Dispensing" may be obtained from Evans & Sons (Limited), Montreal, at \$1.25 per copy; B. G. Lennon & Co., East London and Port Elizabeth; Lennon & Tebb, Cape Town; and Bertie-Smith & Co., Bombay, at 5s. per copy.

WE have pleasure in announcing to Continental subscribers that henceforth, by arrangement with the post offices of the various countries, subscriptions to THE CHEMIST AND DRUGGIST can be paid at any post office in Austria-Hungary, Belgium, Denmark, Germany, Holland, Norway, Russia, and Sweden at our rates, namely 10s. per annum including postal delivery to subscribers in any of those countries. Subscriptions may date from the first issue of any month.

THE CHEMIST AND DRUGGIST OF AUSTRALASIA, published monthly at our Melbourne office, can be supplied to subscribers outside Australasia at 5s. per annum, payable in advance, and commencing at any date. Chemists interested in the drug trade and the pharmaceutical affairs of the Australasian Colonies will find a full record of all events affecting their occupation in *The Chemist and Druggist of Australasia*. Single copies can be supplied at 6d. each. Application should be made by English or American subscribers to the office at 42 Cannon Street, London,

THE reading cases which we offer to subscribers are now used by a very large number of chemists, and are found very convenient. They keep together thirteen numbers in very tidy form, always ready for reference. By having two cases in hand the numbers of a complete volume are always available until the time comes for binding. We sell these cases at the office for 1s., or by parcels post 1s. 3d., or two for 2s. 3d. We cannot forward them to any house for enclosure, nor by any of the carriers, as in the latter case we have to pay for booking.



Metropolitan Reports.

ALLEGED EMBEZZLEMENT.—James Martin, clerk, aged 21, was charged at the Westminster Police Court on Saturday with stealing 23*l.* belonging to his employer, Mr. Llewellyn Rees, chemist and postmaster, 267 King's Road, Chelsea. The prisoner had been in Mr. Rees's service for over five years. He was remanded.

TRICKING A SURGEON.—In the City of London Court, on Saturday, before Mr. Commissioner Kerr, the case of Peall *v.* Dobbin was heard, which was an application on behalf of Mr. Henry William Peall, of 133 Minories, E.C., for the committal to prison of the defendant, Mr. Dobbin, described as a surgeon, of 12 Brunswick Gardens, Notting Hill, for non-payment of a debt of 5*l.* 7*s.* The plaintiff's representative said that the defendant had frequently promised payment. Several attempts had been made to serve him with the summons, and eventually a scheme had to be resorted to in order to do so. The defendant was informed that a patient in the neighbourhood was dangerously ill, and when in the street the summons was handed to him. His Honour said he was surprised to hear such a statement. He made an order for payment of 10*s.* a month.

THE CHEMICAL CARBON COMPANY.—Mr. Commissioner Kerr, judge of the City of London Court, had before him the case of Gibbons *v.* The Chemical Carbon Company (Limited) on Friday. The plaintiff, Mr. Alfred Gibbons, an advertising agent, of 172 Strand, sued the defendant company, of 62 Holborn Viaduct, E.C., to recover 4*l.* 10*s.* for advertisements inserted in the *Lady's Pictorial* at the order of the defendants. The defence to the action was that no order had ever been given for the advertisement. Mr. E. B. Tattershall, solicitor for the plaintiff, produced an order signed by one Menze, who, he said, represented himself as the sole agent for the United Kingdom for the defendants. The defendants' solicitor said they never authorised Menze to order the advertisements. The learned judge said it was for the plaintiff to prove that Menze had authority to give the order, and accordingly the case was adjourned till August 12 for the production of Menze.

SALE OF NARCOTICS.—An inquest was held on Saturday before Dr. Wynn Westcott respecting the death of Mrs. Ellen Champion, aged 69, widow, who died at her residence, 71 Fairbridge Road, N., on the previous Tuesday. The evidence was to the effect that the deceased, who had independent means, was addicted to the excessive use of stimulants and narcotics, especially of the latter, which she purchased at more than one chemist's, of a strength of 40 minims per dose, obtaining eight doses at a time. Latterly she became weak, and died at 9 P.M. on Tuesday from opium poisoning. Mr. Reed, a chemist, stated that the prescription was not signed; he first had it at his establishment on March 27, 1885, and the last time on July 13, 1889. It was made up in 8-oz. bottles, one dose to be taken at bedtime, but he knew her to have eight of these bottles in five or six days. The jury found that the death arose from poisoning by opium taken in excessive quantities by herself, and that the said death was from "Misadventure."

DEODORISING OPERATIONS.—At the weekly meeting of the London County Council, held at the offices, Spring Gardens, S.W., on Tuesday, Lord Rosebery presiding, the Main Drainage Committee reported that they had received from the chemist a further report on the condition of the River Thames, and on the deodorising operations. The report was to the effect that the river was now in a much more satisfactory condition, the change in the weather having effected a material improvement. With regard to the deodorising operations, the chemist stated that, from July 11 to 20, 128 tons of manganate and 47 tons of sulphuric acid had been used at the outfalls, and 9 tons of manganate and 2 cwt. of sulphuric acid at the various storm overflows. The quantity in stock on the last-named date was:—At the outfalls: manganate, 16 tons; sulphuric acid, 31 tons. At the storm overflows: manganate, 37 tons; sulphuric acid, 15 tons. The committee recommend that the seal of the Council be affixed to the following documents:—Contracts with Messrs. C. Tennant, Sons & Co., the Widnes

Alkali Company (Limited), and Middleton, Kirkpatrick & Barr, for the supply of manganate of soda; and with Sadler & Co. (Limited), for the supply of sulphuric acid. The recommendations were approved without discussion.

AN OLD-ESTABLISHED BUT NOT PROFITABLE BUSINESS.—On Tuesday, in the Westminster County Court, the action of Arnold *v.* Parker was disposed of by his Honour Judge Bayley. The defendant was described as a chemist carrying on business just off Wardour Street, and the amount of the debt on the judgment was 2*l.* 5*s.* In answer to his Honour, the defendant said he had not been in a position to pay. Plaintiff's Solicitor: But you are a chemist? Defendant: Yes, but I only have about a half-share of the profits. Plaintiff's Solicitor: It is a very old-established business, and has got a good reputation. Defendant: Yes, that is true, but, like some other old-established businesses, it is not very profitable. In answer to further questions he said the business had not been profitable for the past three years. The takings had not averaged more than from 15*l.* to 16*l.* a week lately, and not much of that was profit. The rent of the premises was 150*l.* a year. There were eight rooms in the house, but most of them were empty, and he had made no effort to let them. There was some stock but he could not say how much; it had not been valued. He was prepared to make an offer of 10*s.* a month. Plaintiff thought defendant ought to pay more than that, and his Honour ordered him to pay 1*l.* a month. Defendant: I shall not be able to pay more than 10*s.* a month. His Honour: The order is a pound a month.

PROFESSOR WANKLYN'S DEBT.—On Tuesday his Honour Judge Bayley, sitting in the Westminster County Court, had before him the case of the Mutual Tontine Chambers Association *v.* Wanklyn, on an application to commit the defendant for the non-payment of a debt. The defendant did not appear. Mr. Wall, the plaintiffs' solicitor, said the defendant was a well-known chemist, holding several lucrative appointments. He was chemist to the Pure Water Company, and received a salary of 200*l.* for that. He was also chemist to other public companies. He had been in partnership with a Mr. Cooper, and they had carried on business in Westminster Chambers. They agreed to pay 20*l.* a year, the defendant Wanklyn being responsible. There were two quarters owing and the place had been shut up. On this statement he asked for an order of committal. His Honour: You must call evidence of means. Plaintiffs' solicitor said he had no witnesses, but he would be sworn himself. He was then sworn, and deposed that he knew that the defendant had been in partnership with Mr. Cooper, who was a member of the Savage Club, and against whom there was a judgment. He knew of his own knowledge that the defendant held appointments with several good companies, and that he was a chemist of high standing. His Honour made an order for the defendant's committal, suspending the warrant for a month.

LAUDANUM SENSATIONS.—Mr. Charles Phillips, a middle-aged gentleman of independent means, residing at 3 Regina Road, Holloway, committed suicide with laudanum last Friday. At an inquest held on Wednesday a letter was produced addressed to his sister, in which the deceased had written the following:—"10 45. Took a dose. Writing this fifteen minutes after taking dose. Have been reading during the interval. I am perfectly sensible, but a little drowsy. Longing for the end. I have just washed the glass, and put it at the back, on the sideboard. Begin to fear it (the laudanum) must have lost its goodness. Have had it four or five years. 11.30. Just called old Solomon (his landlady). Nothing more than drowsiness still going on. Feel very anxious about its being a failure. 11.40. Mrs. Randall just finished the room and gone. 11.50. Just looked in the glass, and fancy I am changing colour a bit. Look rather green. Now it is over. It is an hour since I took it. 12.10. The old woman has just been making a great noise for about four minutes, just to let me know she is still at her work. She is a very bad specimen of human nature." Finally the deceased wrote:—"The very boy's youth saved him; but what a mother to encourage him to pursue such a dangerous game!" At the inquest no one was able to say what this meant. The medical evidence was to the effect that death ensued from laudanum-poisoning, and a verdict of suicide whilst temporarily insane was returned.

RAILWAY RATES.—A very large meeting was held at the Mansion House on Friday last, July 26, under the presidency of the Lord Mayor, "for the purpose of considering what further steps should be taken to prevail upon the railway companies to agree to terms more equitable to traders, and also to establish a central organisation for concerted common action among the mercantile representatives." The meeting gave evidence of the unanimity of the trading classes of the country in condemnation of the unfair classification of goods which has been proposed by the railway companies. Sir John Harwood, of Manchester, said that under the new scale the Manchester corporation would have to pay 33,000% more a year on the coal carried for the gas-works, and the increase of prices on food products and the necessities of life of the people would be enormous. Mr. Coke, chairman of the Liverpool Chamber of Commerce, Mr. H. Lee, president of the Manchester Chamber of Commerce, Mr. David Howard, representing the London Chamber of Commerce, Mr. Alright (Birmingham), Mr. Gane (Blackburn), Mr. Cooke, the wholesale draper, Mr. O. V. Morgan, M.P., Mr. Lafone, M.P., Mr. Cossham, M.P., and Baron Dimsdale, M.P., were also among the speakers. It was resolved, on the motion of Mr. Howard, that in view of the serious objection taken to the classifications submitted by the railway companies, the Board of Trade should invite the aid of a commission of experts with the object of assisting the Department to frame a classification upon a fairer basis than that presented. After forty years' experience in railway work, the mover said, it could not be impossible to make a proper classification. Other countries had done this, and what was possible with others should be possible to Great Britain. It was also resolved to form an association to concert common action and to be representative of agriculture, commerce, and of the various other interests affected.

CHARGE OF MANSLAUGHTER AGAINST A CHEMIST'S ASSISTANT.—Mr. Braxton Hicks held an inquest at the Star and Garter, Battersea, on July 25, on Lucretia Lydia Goodman, three weeks old, whose parents reside at 10 Urswick Road, Battersea. According to the evidence, the child was suffering from thrush, and on July 10 the mother sent to the shop of Mr. G. F. H. Bartlett, of 143 High Street, for a pennyworth of fluid magnesia. The nurse who fetched it was served by George Henry Hill, assistant, Mr. Bartlett being in the shop at the time. The next day half-a-spoonful of the fluid was given to the baby, who gasped for breath, then screamed, and vomited blood and phlegm. The nurse thereupon took the child and the bottle to Mr. Bartlett's shop, and said, "What have you given my baby?" giving Mr. Bartlett the bottle. She also said, "I came last night for a pennyworth of magnesia, and this is how it has served the baby, and my mouth is all in blisters." He tasted it and spat it out to the floor. He said, "It is a magnesia, but it is the wrong sort. I will change it for you if you like." She replied, "No, decidedly not. Let me have what you gave the baby," but he retained the bottle, saying, "This is the sort he ought to have given you." She said, "Do you think it is a poison?" He said, "Oh, no," adding, "You go home, get a lemon, squeeze the juice out, and give it to the baby. Give her plenty of milk, and she will be all right." Just then the baby had a fit of vomiting, and Mr. Bartlett got a glass with a little liquid in it, saying, "Give this to the baby." Witness tasted it, and it was sharp, and not like the other medicine. Mr. Bartlett afterwards said, "Wait a bit, I will give you something to give the baby." He gave her something, but she did not give any of it to the baby, which she then took to Dr. Barkwell, as well as the bottle. When he saw the child's mouth, the doctor said it was in a fearful state; he gave her some medicine for the child, and told her to tell the mother to hope for the best. She took the medicine back, and a dose was given to the child every two hours. It did not vomit again. Dr. Barkwell saw the child on Thursday night and again on Friday morning, when he said it was very bad, but did not say from what cause. The baby died at 2.45, after suffering great pain. The father insisted on an inquest. Among other evidence given was the following:—

Mr. George Frederick Handel Bartlett, chemist, carrying on business at 143 High Street, Battersea, said:—I don't remember the last witness coming to me on July 10, but I do on July 11. She produced a bottle, and said she had bought

its contents at my shop the night before, and that she had given some of it to the baby, and it had made it ill. She had the baby with her, and I looked at it. I tasted what was in the bottle, and at the time I thought it was a very strong solution of sulphate of magnesia. I told her to give the child plenty of milk. I then added to some of that which I poured from the bottle some fluid carbonate of magnesia. The evidence of the last witness is fairly correct as to other matters. The sulphate of magnesia is kept about three or four bottles away from the carbonate. I have not changed the mixtures in the bottles since July 10. I am not certain whether I emptied out all the contents of the bottle before I put in the carbonate of magnesia.

George Henry Hill, having been duly cautioned, said:—I am an occasional assistant to Mr. Bartlett, and live at 143 High Street, Battersea. I have not been brought up as a chemist. I am a pipe-rack manufacturer. I only assist Mr. Bartlett in the evenings. I have apartments above his shop. I know the run of his shop fairly well. I remember serving Mrs. Partridge on the Wednesday. I asked Mr. Bartlett the price, and he said, "Threepence." So far as I can remember I served fluid magnesia. I don't know the difference between an acid and an alkali.

Dr. George N. Pitt, of Guy's Hospital, who had made a post-mortem examination, and Dr. Thomas Stevenson, who had analysed the stomach, came to the conclusion that death was due to irritant and corrosive poison. The last-named witness had analysed besides the contents of various bottles produced, and some red stains on a leather chair-cover, also produced. He was of opinion that death was caused by the action of solution of potash, traces of which he found in the intestines.

Police Constable Humphreys, of the Putney Police, 183 V, produced an admirable sketch of Mr. Bartlett's chemist's shop, showing the shelves from which the magnesia was taken, and which the coroner said did great credit to witness.

Inspector Attwood, of the Battersea Police, deposed to taking samples from the bottles of magnesia, &c., on the shelf, and taking them to Dr. Stevenson.

Mr. Hill, recalled and cautioned, said he had served in Mr. Bartlett's shop for only a short time since the last inquiry, and that was only because Mr. Bartlett was out of an assistant.

The coroner said he believed that Mr. Bartlett advertised rather extensively. It would have been better if he did less and got a duly-qualified assistant.

Mr. Bartlett said he could not afford to employ a fully-qualified assistant. If he did not advertise he should do no business. He was never out of the business as it was. He had not known Hill make a mistake before. This was the first accident that had occurred at his shop.

The coroner then summed up the case to the jury, remarking that Hill was responsible for the mistake (as he would call it) which he had made. It would be for him to show that it was not the result of gross negligence. He was not qualified to act as a chemist's assistant, and did not even know the difference between an acid and an alkali. The question arose, Was this to be allowed? It was, of course, a great peril to the neighbourhood. After explaining the law of the case, he suggested that the jury should retire to consider their verdict.

This they did, returning in a quarter of an hour with a verdict of manslaughter against Hill.

The foreman also said the jury wished to express the opinion that Mr. Bartlett should be severely censured for employing Hill as he had done.

Mr. Bartlett, who is very deaf, was then recalled and severely censured by the coroner, according to the jury's expression of opinion.

The assistant, George Henry Hill, was brought up on a charge of manslaughter at the Wandsworth Police Court on July 26. On the application of Inspector Attwood sufficient evidence was taken to justify a remand. Bail was accepted.

INSECT POWDER has been used as a dressing for ulcers and wounds, to prevent the formation of maggots. It also answers to preserve dried insects and plants in cabinet collections.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor, will much oblige.

BIRMINGHAM.

MET HIS MATCH.—The gentleman who tried to "ring the changes" on a Summer Lane chemist on Saturday last was the loser to the tune of half a sovereign.

IF NOT TOO LATE.—A gentleman is going the round of the shops asking for 2 oz. of pure rectified spirit. He carries a small black bag, and is an exciseman.

THE HERB TRADE.—*Apropos* of your article on the herb trade of France, it may not be generally known that in this city herbalists are largely on the increase, many new ones having recently commenced business in a small way with well-stocked shops. Pharmacists must look to this their legitimate trade.

MOVING.—The Pharmaceutical Society is actively engaged in our city in asserting the Pharmacy Act, and one offender at least has had to pay up and look pleasant, because he kept the title of "chemist and druggist" over his shop door and sold poisons, he not being qualified to do so legally. The usual solatium of 10*l.* was demanded, and promptly paid.

A SERIOUS MISTAKE.—On Saturday night a man, named Frank Bryan, of Heath Street, Winson Green, took about 100 grains of bichloride of mercury in mistake for hyposulphite of soda. The chemicals were used by Bryan in amateur photography. He was conveyed to the Queen's Hospital, where emetics were administered. He is progressing favourably.

BURGLARY AT A BIRMINGHAM DENTIST'S.—Between Saturday night and Monday morning the chambers occupied by Mr. Gray, dentist, 33 Corporation Street, were burglariously entered. The burglars forced open Mr. Gray's escritoire and overhauled his instruments and papers. These were evidently regarded as unworthy of removal, and about 100*l.* worth of gold plates and gold filings stored in the drawers appear to have been overlooked.

LADIES are still pushing their claims to positions in public dispensaries, &c. During the last few weeks a young lady of this city passed the Apothecaries' Hall assistantship, and it has erroneously got about that she is the first. This is not the case, for early this year Miss Moore, daughter of Councillor Moore, passed this same examination. The latter lady assists at the General Hospital. Another lady, Miss L. G. Mannox, passed the Preliminary held at this centre in July. Of the nineteen candidates who presented themselves eleven failed.

BLACKBURN.

SUICIDE BY OXALIC ACID.—On July 23 an inquest was held here on the body of a millworker named Elizabeth Anderton, who died from taking some oxalic acid bought at the shop of Mr. J. Harrison, chemist and druggist, 92 Audley Range. Mr. Harrison, who was called as a witness, stated that the deceased came to his shop and asked for some oxalic acid to wash out oil marks in some cloth. He knew the woman well by sight, she having been a customer of his for the past three years. He let her have 1 oz. of the acid. One of the jury, evidently in blissful ignorance of the Sale of Poisons Act, remarked that "there ought to be a restriction in regard to the selling of poison." The Coroner: Yes, there are a good many things sold with which there ought to be more precaution taken in that line. The jury returned a verdict to the effect that the deceased poisoned herself whilst of unsound mind.

LIVERPOOL.

CARBOLIC ACID is still the popular medium for suicide. A man in a lodging-house in Circus Street took a quantity on Tuesday, and died soon after at the Northern Hospital.

His name was Gallagher, and he was 29 years of age. He is said to have been intoxicated at the time he took the poison. The police have some suspicion that he may have been the man who lately murdered a pawnbroker's assistant at Atherton.

HOSPITAL SUNDAY AND SATURDAY FUND.—Many persons hold that this fund has proved prejudicial to hospital charity, as many persons who formerly subscribed now content themselves with giving a small contribution at the annual collection. It is, however, satisfactory to note that the amount in Liverpool this year reached 9,750*l.*, being 500*l.* than was contributed in 1888.

INFANT MORTALITY.—At a meeting of the Health Committee last week, Dr. Hope, assistant medical officer, called attention to the extraordinary mortality among children recorded during the previous week. Of the total deaths, there were 198 of children under five years of age, and 145 of these were cases of children under twelve months old. A large proportion of the deaths was due to diarrhoea.

OPINIONS DIFFER.—Your leader of July 20 on the recent prosecutions here and at Ipswich for the sale of poisons by unqualified persons has been the means of causing some discussions on the subject. Some of the younger men uphold the view recently enunciated by several judges, that the evident intention of the Pharmacy Act was to recognise the person who actually hands the goods to the customer as the seller, and to require that they should be so sold by registered persons only. On the other hand, the older men, who remember the passing of the Act and the discussions thereon, assert that those who drafted the Bill most certainly intended to regard the proprietor as the seller, and thus to provide for a qualified ownership. This, they hold, pervades the whole spirit of the Act and every provision therein.

IRELAND.

A NEAT and tastefully fitted-up drug and chemical store has just been opened at Ballymacarrett by Mr. Smith.

AT a special meeting of the Sligo Dispensary Committee held last week, Dr. Martin was elected dispensary officer by seventeen votes to sixteen given for Dr. Vincent Fenton.

ON Sunday last a man named James Gregg, an engineer, about 70 years of age, died from an overdose of methylated spirit, which he was in the habit of taking, it is stated, as a medicine.

DR. MILES STERLING, the oldest medical man in Ireland, died last week at his son's residence, Castlecomer. The deceased had for a number of years enjoyed an active practice, and was widely esteemed by the public.

THE trial in Limerick of Patrick O'Brien on a charge of having poisoned his father-in-law with arsenic was last week concluded at Waterford. The jury, however, disagreed, and the prisoner was put back to the winter assizes for a new trial.

THE Board of Guardians of the Ballina Union invite tenders for a year's supply of drugs and medicines for the workhouse and two dispensaries of the district. Applications, they state, must be made to the chairman, and two solvent sureties must also be named.

AT the Antrim Assizes, held a few days ago at Belfast, Mr. J. Ruddy Lesburn obtained 200*l.* damages against the Belfast Mineral Water Company for severe injuries sustained by being knocked down and driven over by a van belonging to the defendants.

THE dispensary officers of the North Dublin Union have at last succeeded in obtaining annual holidays. By a majority the guardians have agreed to pay their substitutes out of the rates during the holiday period. Hitherto the officials concerned have had to do this out of their by no means princely earnings, and it was high time that a change should occur.

ACTION AGAINST A CORN-DOCTOR.—At the Quarter Sessions, Dublin, before the Recorder, an action was heard in which the plaintiff, Mr. John Lucas, keeper of the Gate Lodge, Phoenix Park, claimed damages from "Professor" Kennedy for injuries to his foot through the use of a prepara-

tion for the cure of corns made by the defendant. Sir Charles Cameron gave evidence that the preparation acted as a slight vesicant, was harmless, and that he had used it in his own family; not on himself, as he was not troubled with corns. The Recorder said the plaintiff had failed to make out his case, and dismissed the action.

ALLEGED NEGLIGENCE OF DUTY BY AN APOTHECARY.—The Dispensary Committee of the Cork Board of Guardians have again had under consideration the case of the resident apothecary of the Union. Mr. Parker, one of the committee, stated that he had inquired from Mr. Scannell, chemist, with reference to the arrangement said to have existed between him and Mr. McSweeney, and he was informed that the latter had arranged to return to the former such medicines as would be given to patients during his absence. Complaints had been made that the public were much inconvenienced by the arrangement, and this unsatisfactory practice should be remedied. Mr. McSweeney said that as the porter did not reside in the dispensary, he would get a servant himself to answer the calls. Mr. Lee, dispensary apothecary, in reply to a query regarding an arrangement between himself and Mr. McSweeney, by which one of them would be enabled to obtain a holiday on each alternate Sunday, said he could not consent to the proposal under any circumstances, as it would not be satisfactory. Mr. Hall gave notice that at the next meeting he would propose the hours at which the resident apothecary would supply medicines daily should be painted on the doors of the dispensary.

SCOTLAND.

ABERDEEN.

ABERDEEN UNIVERSITY.—SUMMER GRADUATION IN MEDICINE.—Amongst those who have passed we observe the following connected with pharmacy:—D. MacRitchie, Inverness, has had the degree of M.B. and C.M. conferred on him; Mr. James Broomhead has passed the first part of his first professional examination; and Messrs. W. J. M'C. Ettles, Elgin (with credit) and H. P. Taylor their second professional examination. In the prize-list we also observe that Mr. R. H. Marshall, Aberdeen, has gained a second-class certificate of merit in natural history, junior division, and a medal in practical chemistry; Mr. J. Broomhead has gained a first-class certificate in practical chemistry; Mr. W. J. M'C. Ettles has gained a medal in practical physiology, with 80 per cent. of marks; and Mr. J. R. Levack, Aberdeen, has gained a second-class certificate in practical pathology, with 70 per cent., and a second-class certificate in medical logic and medical jurisprudence, with 72 per cent.

DUNDEE.

THE members of the Chemists' Athletic Club played a cricket match in the Baxter Park on Wednesday with the members of the Eastern Co-operative Society C.C. The young knights of the pestle did not shine in wielding the willow. In their first innings they had 12 runs to their credit, in the second 15 for seven wickets; while the Co. Ops. had 29 for their first and 67 for their second innings. Result, a draw. The young knights gave up their botanical excursion for the sake of the cricket-field.

A DOCTOR'S SHOP.—Mr. Robert Drummond M'Gregor, practising as a physician and surgeon in Dundee, has commenced three actions in the local Sheriff Court—two against Dr. Kelly, lately his *locum tenens*, and the third against James Roger, sen., and James Roger, jun., Commercial Street, Dundee. In the last he asks for 250*l.* damages, alleging that he sold a chemist's business in Victoria Road to the defendants, retaining at the same time the right and privilege of there daily meeting patients who called at the shop for consultation. There was, he avers, a bargain made between the Rogers and himself that the doctor was to become a nominal partner on the payment of one guinea, and the business was carried on under his name. The Rogers had, however, in violation of that arrangement, disposed of the business to Dr. Kelly, presently practising in Dundee; and pursuer was, therefore, excluded and debarred from exercising his rights and privileges. The case was mentioned in court on Tuesday, and comes on for hearing to-day (Friday).

EDINBURGH.

WE understand that Professor T. R. Fraser will inaugurate the evening meetings of the North British Branch in October.

MR. J. G. ANDERSON, Aberdeen, has, we understand, acquired the business of Mr. George Black, Newhaven, who is retiring.

MR. MICHAEL CARTEIGHE has been asked to open the coming session of the Edinburgh Chemists' Assistants' and Apprentices' Association. He has, however, declined to gratify what appears to have been a very unanimous desire of the members.

PRESCRIPTION-WRITING.—A medical friend tells us that the final examinations in medicine which have just been completed in the University have been notable for the large doses prescribed theoretically by candidates. Sixteen—an unusual number—had to appear a second time for prescription-writing. Our general experience of newly-graduated medicals is that the doses they prescribe are so cautious as to be ineffective either for good or ill.

GLASGOW.

MR. GEORGE TOCHER, for many years one of the leading pharmacists at Helensburgh, has just passed the final examination for the degree of L.R.C.P., and intends to practise in Glasgow.

THEN AND NOW.—Professor George Buchanan, in his closing address to the students of Glasgow University on graduation day, speaking of the chronic complaint that the medical profession is overstocked, mentioned that some fifty years ago, when the population of Glasgow was only 250,000, there were 250 doctors in the city; while now, to 700,000 inhabitants, there are not more than 375 medical men. If figures can satisfy, who need longer despond?

HORRIBLE DISCLOSURES!—A writer who has unquestionably enjoyed superior facilities for gaining an intimate and exhaustive knowledge of even the most sacred of our trade secrets contributes an article on "The Grocery Trade" to a local paper, in which the following paragraph occurs:—"The grocers who do a cash business are still offering 'novelties,' and some branches of business are complaining that their preserves are being trodden upon, the apothecaries and confectioners being the chief complainers. Some grocers are now selling splendid sponges and patent medicines at such cheap prices that the apothecaries have found it necessary to revise their lists; and if matters go on as they are now doing, the apothecaries fear that the days of 'privately marking the prices on bottles will disappear.' It is a well-known fact that the druggists have a secret understanding among themselves as to prices, and they never dispense medicines but they mark the price in hieroglyphics on the paper pasted on the bottle. Well, the fact of some grocers having started the apothecary business has caused anxiety to the latter."

GOLSPIE.

BATHING FATALITY.—Mr. Adam Mennie, chemist, who was in the habit of bathing in the sea every morning during the season, went out as usual on Saturday last, and was drowned. He was only a fair swimmer. He appears to have been caught by an undercurrent and carried away to sea.

THE young but thriving port of Seattle, in the Washington territory of the United States, was almost entirely consumed by fire on June 6 last. On that occasion the principal "drug store" of the settlement, the Stewart & Holmes Drug Company, in common with nearly every other firm in the city, lost its store and stock. The company at once resumed business—at first under shelter of the trees, but a few days later in "a commodious tent," in which it started to repair the damage done by the flames. Several of its New York creditors have since been notified that the concern is ready to honour sight drafts whenever presented, notwithstanding the fact that most of the stock was destroyed by the fire.

General and Provincial News.

OBSTRUCTING THE PAVEMENT.—Mr. George A. Parkin, of Queen Street, York, has been fined 2s. 6d. at the York Police Court for leaving some boxes outside his shop.

MEANT IT.—A chemist named J. W. Ford has committed suicide at Parkside, near Adelaide, South Australia, by squeezing through a trap-door in a tank and standing upright in the water.

FEVER PTOMAINES.—Mr. A. P. Luff, M.B., B.Sc., reports to the *British Medical Journal* that he has obtained evidence of the existence of a ptomaine in the urine of a typhoid-fever patient, and also in that of a scarlet-fever patient. Both ptomaines give reactions different from those of previously-known animal alkaloids, but they have not been obtained in sufficient quantity to determine their chemical composition and constitution. Mr. Luff is continuing his research.

A CORONER ON CHLORODYNE.—At Southsea last week the deputy-coroner held an inquest on a tailor named Carben, aged 74 years. The deceased had been unwell on Tuesday, and a linseed-meal poultice was applied to his chest, and two doses of chlorodyne (each of 20 drops) administered during the night by his wife, who said it was the first time he had taken it. At daylight on Wednesday, however, he told his wife that he felt somewhat better, but soon after she found him dead by her side. Dr. Pike, who was called in, attributed death to pain acting upon a weakened heart, and he thought that the chlorodyne had not produced any fatal effect. He considered, however, that the dose of 20 drops was a big one either for aged persons or for young people, and that the printed notice upon the bottle, that "the dose was to be from 10 to 30 drops," was an unwise direction for the public. The jury returned a verdict of "Death from natural causes."

ASHLEY'S PATENT (MACHINE-MADE) BOTTLE COMPANY (LIMITED).—A meeting of this company was held at the Cannon Street Hotel last week, to consider overtures which had been made for the purchase of the works at Castleford and of the assets of the company. The chairman explained that the sum offered was 210,000% in cash, shares, or securities, and the company would retain their patents, and the royalties thereon, for which they would receive a minimum of 5,000% a year royalty. Referring to the Bottle Union, he said that when the Union had obtained possession of the trade generally, some supposed that they would not use the company's patents, but that was impossible under the bargain, for they would have in any circumstance to pay 5,000% a year as a minimum dead rent on the royalties upon the use of the patent. He had no fear of the Union succeeding, and intimated that any shareholders in the old company could have shares in the new one or cash. The meeting approved of the provisional contract between Mr. Fowler and the directors, and after two more meetings it will take effect.

ALLEGED LIBEL.—A case of some interest to chemists came before Mr. Justice Cave at the Yorkshire Summer Assizes, Leeds, on Tuesday. It was an action for libel and slander brought by Mr. Alfred Firby, analytical chemist, Albion Street, Leeds, against Messrs. Fox & Atkinson, manure manufacturers, Leeds, who it was stated said of the plaintiff, "He is not competent to analyse manures; he is not an analyst; he is simply an old washerwoman." Mr. Waddy in his statement for the plaintiff explained that Mr. Firby, as analytical chemist to the Yorkshire Farmers' Protection Association, had in April, 1888, and on behalf of members of the association, analysed some of the defendants' phosphoguanos. His report was not favourable to the defendants, and when they were made aware of it they complained of the plaintiff's incompetency, and particularly that he had not discovered all the constituent parts of the manures which had been submitted to him. The effect of the report was to show that the guano was worth 4l. 12s. to 4l. 15s., instead of 7l. 10s., which was the defendants' price. For them Mr. Lockwood, Q.C., explained that Mr. Firby had omitted to detect nitrates in the samples, and when his estimate of value came to the knowledge of the defendants, they referred the matter to Professor Sibson, F.C.S., London,

in whose opinion the plaintiff had overlooked the existence of one of the chief fructifying elements in the manure. Moreover on a second and more thorough analysis Mr. Firby fixed the value at 5l. 12s. 6d. Mr. Lockwood contended that there was a joint interest in the matter which protected Mr. Atkinson and his firm from any conversation that took place on the subject of this interference of Mr. Firby to his clients. This was the view which his Lordship took, and in giving judgment for the defendants with costs, he said that the case showed that analytical chemists ought not to take upon themselves to give an opinion upon the value of an article, which if wrong might do the manufacturers a serious injury, unless they were quite sure they had taken into account all that ought fairly to be taken into account in estimating that value.

THE HASLAND POISONING CASE.—At the Derby Assizes last week Mary Ann Whitfield, a married woman, forty-six years of age, was charged with the murder of her son Ernest, aged eight years, by poisoning him some time before June 27 of last year. Another child, Alfred, was also supposed to have been poisoned. The poison alleged to have been used was laudanum, and the principal evidence in support of the charge was given by Mr. A. H. Allen, F.I.C. &c., who stated that in the remains of Alfred he found no poison. In the remains of Ernest he found meconic acid in small quantity. Meconic acid was a body absolutely peculiar to opium, and indicated the previous existence of opium. Laudanum was a solution of opium in spirits of wine. The bodies had been buried about nine months when he made the analysis. Any trace of poison found in the stomach was not such as caused the death, as it would have become absorbed. In reply to Mr. Hextall, he said if he could not establish the presence of morphia he should not have thought of hoping to find poison, and added, "If you cannot see a man at a distance you do not expect to see the nose." "That," replied counsel for the defence, "is a proposition on which I will not attempt to cross-examine," and then went on to ask if the presence of meconic acid was a reliable test of the presence of opium. Mr. Allen's reply was, "It is quite a characteristic of opium, and it does not exist outside opium. It is not a commercial product that one can buy in a shop, having been separated from opium." Asked what quantity he found in the organs, Mr. Allen said it would "probably amount to a fraction of that contained in a fraction of a drop of laudanum." Could the witness put into form the proportion which that fraction might be to the whole drop? Mr. Allen replied, "I take it, it would be a quarter." "So that would be a fraction of a quarter of a drop?" queried counsel. "Yes," was the answer. "The quality of laudanum differs in strength in various shops, does it not?" "It does," said Mr. Allen, "but it ought not to." "The amount you found, then," asked counsel, "was really an infinitesimal quantity?" In reply witness remarked, "I should go further than that; it was not infinitesimal." In reply to the judge he added, "The amount of meconic acid found was no indication of the amount of opium in the stomach. In fact, I may say, my Lord, I caught the meconic acid in the act of going. If the body had remained another two months there would have been no traces of it." "Just so," said my Lord, and Mr. Allen stood down. Other evidence was given, the whole case occupying two days, and ultimately the accused was found "Not guilty," there being no evidence that she had administered poison to the boys.

ACACINE is a white powder looking and tasting a great deal like acacia, but is not so bulky. To the touch it appears considerably like pulverised arrowroot. An eminent chemist, says Mr. G. G. Allen, in the *Registered Pharmacist*, suggests that the manufacturer has succeeded in extracting the mucilage from Irish moss, the result being, when finished, a preparation which is put on the market as acacine. It produces an emulsion almost instantly, and one that is apparently complete when examined in the bottle as finished. In preparing the emulsion of cod-liver oil with acacine, no amount of triturating will reduce the size of the globules to that of an acacia emulsion. After taking an egg-beater and beating the acacine emulsion, and comparing it with acacia emulsion, it was found that the oil globules of the latter were at least a half smaller than those of the acacine emulsion. The acacia emulsion separates, but the acacine one does not.

THE HOP BITTERS COMPANY (LIMITED).

ON Friday last an extraordinary general meeting of the above company was held at the Cannon Street Hotel, Mr. F. Hess in the chair. There was only a small attendance of shareholders. The secretary (Mr. W. Russell) having read the notice convening the meeting,

The chairman moved that a reconstruction of the company was desirable, and for that purpose it would be wound up voluntarily under the provisions of the Companies Act, 1862 and 1867. He mentioned that a similar resolution had been passed a fortnight previously, but it was necessary that it should now be formally confirmed in order to meet the statutory requirements.

Mr. H. Edgell seconded the motion, which was agreed to *nem. con.*; and Mr. Alfred Augustus James, of 66 Coleman Street, E.C., and Mr. Harry Edgell, of 9 Fleet Street, E.C., were then appointed as liquidators for the purposes of the winding-up.

The chairman next proposed a special resolution, authorising the liquidators to enter into an agreement with a new company when incorporated, for the sale and transfer of all the undertaking and assets of the company to the new company, upon the terms of the scheme of reconstruction previously published.

Dr. Biggs seconded the resolution, which was carried unanimously.

The chairman said that was all the business before the meeting. He hoped the shareholders as a body would help the directors to carry through the scheme of reconstruction, which must, however, fall to the ground if more than 5,000 shares out of the 70,000 were not taken up.

A Shareholder: What number of proxies do the directors hold?

The Chairman: We hold proxies to the amount of 42,360 $\frac{1}{2}$, which would be available to-day to vote on this motion if it had been found requisite.

The proceedings closed with a vote of thanks to the chairman.

The scheme of reconstruction (as already stated in THE CHEMIST AND DRUGGIST) provides that the new company shall take over the whole of the undertaking of the old concern, and discharge all its debts and liabilities. It will continue to manufacture preparations of hops and other things similar to hop bitters, and other compounds or mixtures, whether medicinal or otherwise. The new company will also provide the sum of 63,000 $\frac{1}{2}$ l., payable in 70,000 shares of 1 $\frac{1}{2}$ l. each, paid up to the extent of 18s. per share, such shares to be issued under the direction of the liquidator or liquidators to such shareholders in the old company as shall accept the same within fourteen days from the date of the notice calling upon the shareholders to accept the same in the proportion of one share in the new company to each share in the old company, and on production by such shareholders of the corresponding certificates for the shares held by them in the old company, and the payment of 2s. per share on application.

MARRIAGE.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

SULLIVAN—SLATTERY.—At St. John's Church, Waterford, Mr. John J. Sullivan, M.P.S.I., The Mall, Waterford, to Abigail Philomena, third daughter of John Slattery, Esq., J.P., of the same town.

DEATH.

SMITH—Died at sea, on April 26 last, while on a voyage to Australia for the benefit of his health, Peter Shankle Smith, of the firm of T. & H. Smith & Co., Edinburgh and London. Aged 42. Mr. P. S. Smith was the son of Mr. Henry Smith, one of the founders of the business of which he subsequently became the head. He was educated in Edinburgh and Germany. Of late years his health has been unsatisfactory, and his doctor had ordered him to take this voyage. He leaves a widow and three children.

BANKRUPTCY REPORTS.

Re ROBERT TWADDLE, 34 Maitland Street, Glasgow, Chemist.

THIS debtor was examined in bankruptcy, before Sheriff Guthrie, on July 26. Bankrupt began business in a small shop in Maitland Street twenty-four years ago. He bought the business there, and gave about 35 $\frac{1}{2}$ l. for it. He started in his present shop twenty years ago. The business was very successful at first, the drawings increasing every year. He opened a shop in Maryhill fourteen years ago, which he carried on for five years. He lost over 100 $\frac{1}{2}$ l. a year there. Latterly the Maitland Street shop failed to pay, the drawings coming down to 7 $\frac{1}{2}$ l. a week. Since beginning business he had never kept any books save one, in which he entered his drawings. This, however, he had destroyed. The state of bankrupt's affairs showed liabilities 498 $\frac{1}{2}$ l. 2s. 6d., against assets 80 $\frac{1}{2}$ l.; or, including 100 $\frac{1}{2}$ l. allowed for goodwill of business, 180 $\frac{1}{2}$ l., leaving a deficiency of 318 $\frac{1}{2}$ l. 2s. 6d. The examination was closed.

ELIZA O'KELL (widow), 3 Newcastle Street, Strand, Chemist.

IN this case the receiving order was made on June 26, and a summary of the bankrupt's affairs has now been issued from the Official Receiver's Department of the London Bankruptcy Court. The accounts show unsecured creditors, 482 $\frac{1}{2}$ l. 7s. 3d.; a fully-secured creditor, 40 $\frac{1}{2}$ l., holding security valued at the same amount; and preferential creditors for 44 $\frac{1}{2}$ l. 9s. 7d. There are no assets whatever. The Official Receiver reports that the bankrupt states she carried on her late husband's business, under management, since his death in April, 1888, at which time the business was insolvent; that on April 17, 1889, she sold the same for 180 $\frac{1}{2}$ l., which sum was expended in payment of rent, costs, taxes, arrears of wages, and household and other expenses. She attributes her insolvency to insufficiency of capital and to mismanagement of the business during her husband's lifetime, and to the expenses having been in excess of the profits. An unsecured creditor is stated to hold the lease, expiring next year, of the bankrupt's premises, which she considers to be of no value, and the fully-secured creditor is stated to hold a bill of sale, given in February last, on the bankrupt's household furniture, of which possession was taken on June 22. The first meeting of creditors is called for August 7, and the bankrupt's public examination is appointed for August 28 at the London Bankruptcy Court.

LEONARD THOMPSON, Thirsk, Chemist.

AT the Northallerton Bankruptcy Court, before Registrar Mr. W. T. Jefferson on July 29 this debtor came up for his public examination, being represented by Mr. A. W. Cass, solicitor, of Thirsk. In answer to the Official Receiver (Mr. J. R. Stubbs) bankrupt said he started business as a chemist in August, 1880, with 800 $\frac{1}{2}$ l. borrowed money. He now owed to unsecured creditors 1,824 $\frac{1}{2}$ l. 18s. 9 $\frac{1}{2}$ d., and after allowing 30 $\frac{1}{2}$ l. 13s. 3d. for preferential payments he estimated his assets to realise 730 $\frac{1}{2}$ l. 8s. 1d. He had put down 500 $\frac{1}{2}$ l. as the amount that would be realised by his stock-in-trade, but he now thought that only 400 $\frac{1}{2}$ l. would be realised. He had not of late years balanced his cash-book, and he could not tell what had been his private and household expenses without going through his cash-book. He knew that this was not proper book-keeping. He had kept no account of what he owed. He had never taken stock until Easter of last year. He had never been solvent since he started business. In the latter part of 1888 he was first unable to meet his payments in full as they became due. Nearly the whole of his present liabilities, with the exception of the money borrowed, had been incurred during 1888-9. He owed 1,450 $\frac{1}{2}$ l. for borrowed money and interest. The case was adjourned.

OREGON CASCARA SAGRADA is claimed by the *Pacific Drug Review* to be equal or superior to any in the market. Any who doubts it can be readily convinced by taking a full dose of the drug.

Trade Notes.

THE directors of Price's Patent Candle Company (Limited), for the half-year ended June 30, recommend a dividend of 10s. per share.

THE directors of W. B. Fordham & Sons (Limited) recommend an interim dividend for the first half of this year at the rate of $7\frac{1}{2}$ per cent. per annum, payable on August 3.

THE directors of Brooke, Simpson & Spiller (Limited) have declared an interim dividend of 5 per cent. per annum on "A" shares for the half-year ending June 30, payable on the 1st prox.

MESSRS. ROURE-BERTRAND FILS, of Grasse, write us that they are not the firm who represent the otto of rose distiller, Christoff, of Kezanlik, in France, as reported in our issue of July 20. Mr. Christoff's agency is in the hands of another house.

RILEY'S TEMPERANCE HOP ALE AND BEER COMPANY (LIMITED).—Registered by Thomas & Hick, 13 Wallbrook, E.C., with a capital of 5,000*l.*, in 1*l.* shares. Object, to manufacture temperance hop ale, temperance beer, or other similar beverages, mineral waters, or any description of non-intoxicating drinks.

It is reported that Messrs. H. H. Warner & Co., of Rochester, U.S.A., the proprietors of Warner's safe cure, are negotiating for the sale of their business to a syndicate of English capitalists. This should be, if consummated, a notable transaction, including, as it will, the immense buildings and business of the house at Rochester, together with branches now in operation in London, Frankfort, Melbourne, Australia, Toronto, Sydney, Pressburg (Hungary), and other places. The purchase price is said to be \$5,000,000.

MESSRS. C. J. BAILEY & Co., of 30 Snow Hill, E.C., have transferred their business in patent rubber brushes, &c., for this country and colonies, as well as France and Belgium, to Messrs. David Moseley & Sons, indiarubber manufacturers, Chapel Field Works, Ardwick, Manchester, and 14 Aldermanbury Avenue, London, E.C. Messrs. C. J. Bailey & Co. will confine their attention to their business in the United States.

BOVRIL (LIMITED).—The directors of the "Bovril" Company have declared a dividend of 20 per cent. per annum. They report that they set aside 2,000*l.* for depreciation of plant, place 2,000*l.* to form the nucleus of a reserve fund, and carry forward a balance of 1,800*l.* to the next account. At the ordinary general meeting of the company held on Wednesday, Dr. Robert Farquharson, M.P. (the chairman), said the statements made in the original prospectus had been amply justified because they were now actually paying 20 per cent. instead of 16 per cent. as they anticipated. In 1888 the business of the company was exactly three times what it was in 1887, and in 1889 that extent of increase had been kept up, the business done by the company being three times as much as it was in the corresponding period of the previous year. He advised the shareholders to stick to their property, and expressed the hope that in the future they would continue to pay 20 per cent.

Personalities.

MR. L. LLOYD THOMAS has purchased the business carried on for some years by Mrs. Nicholson, at 56 Sidbury, Worcester.

MR. W. E. HAINES, chemist, 36 High Town, Hereford, has been appointed chemist to the Herefordshire Amateur Photographic Association.

THE business of Messrs. Hall & Co., chemists, High Street, Brecon, is to be transferred to Mr. J. Meredith, of High Street, in the same town.

THE business lately carried on by Mr. J. W. Britain, M.P.S., 125 Hampstead Road, N.W., has been taken over by Mr. T. T. Nicholson.

CYCLING TO PARIS.—On Monday Mr. S. M. Burroughs, accompanied by Dr. Gubb, travelled to Dieppe by rail and steamer, and, on arriving at the old French city, completed the journey by bicycle.

MESSRS. BREEZE & Co., chemists, of Plymouth and Devonport, have purchased the old-established business of Row & Co., Fore Street, Devonport, and will shortly transfer it to their premises in Catherine Street.

MR. HERMANN WOOLLEY, of Manchester, a well-known member of the Alpine Club, has just accomplished the ascent of the Kazbeck—a notorious mountain in the Caucasus, the peak of which is about five hundred feet higher than Mont Blanc. Mr. Woolley was accompanied by M. Fischer, a Swiss gentleman, and by several Swiss guides.

We are asked to state that the address of Mr. Osmond Henry Lowe, whose name appeared in the list of candidates who had passed the Minor examination last week, should have been Wolverhampton, not Maidenhead. We may mention that the addresses officially given are those recorded when the Preliminary examination was passed, and are in a large proportion of cases incorrect. Officialism, we suppose, can hardly be expected to rectify this fine old joke.

THE first part of Mr. Frederick Janson Hanbury's "Illustrated Monograph of the British Hieracia" has just been issued. It deals with two species—*Hieracium pilosella*, Linn., and its varieties, *pilosissimum*, Wallr.; *nigrescens*, Fries; *viride*, Gaudin; *concinnum*, n. var.; and *H. aurantiacum*, Linn. The coloured plates which accompany the text are really beautiful, and reflect great credit upon Miss G. Lister and Mrs. F. J. Hanbury, the executants. We have to congratulate Mr. Hanbury on the success with which he has dealt with many difficulties before the text has been put forward in so clear and complete a state.

WHEN the Vicar of Dartford presided at the opening of Messrs. Burroughs, Wellcome & Co.'s new works in that town he remarked on the extraordinary development of roses around the buildings, and credited Dr. Percy Smith with the horticultural transformation which had taken place. It appears that the skill displayed in this direction was not that of Dr. Smith nor of Madame Nature, but that the Vicar and all the rest of the company had been deceived by the sleight of hand of Mr. D. B. Saxton, D.D.S., who has lately become attached to the staff of the firm, and who had very deftly wired a number of the finest blooms that the locality could afford to the standard trees which surrounded the building.

Gazette.

PARTNERSHIP DISSOLVED.

Smith, Riley & Co., Shelf, near Halifax, mineral-water manufacturer.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDER.

Seager, James Morrison, late of Gracechurch Street, City, and at Bartlett Street, and St. Leonard's Road, Poplar, and late of Holland Park Gardens, Notting Hill Gate, chemical manufacturer and commission merchant.

FIRST MEETINGS AND PUBLIC EXAMINATIONS.

Okell, Eliza, Newcastle Street, Strand, chemist—August 7, Bankruptcy Buildings, Portugal Street, Lincoln's Inn Fields; August 28, 34 Lincoln's Inn Fields.

Pashley & Greensmith, Nottingham, aerated-water manufacturers—August 3, Official Receiver's offices, Nottingham; August 9, County Court House, Nottingham.

ADJUDICATIONS.

Pashley, Thomas, and Greensmith, Joseph Henry, Nottingham, aerated-water manufacturers.

Symes, William Sandham, Chesterfield, doctor of medicine.

Practical Notes and Formulae.

LABEL VARNISH.

GUM DAMMAR and bisulphide of carbon in sufficient proportions make an excellent varnish, said to be particularly suitable for export purposes, as it gives a high gloss, and is perfectly impervious to damp.

COMPOUND LIQUORICE POWDER.

AN American firm offers a compound liquorice powder, which is made with fennel and liquorice which have been ground together, on the supposition that the flavour and carminative properties of the fennel are retained to their full extent. There is something in this. Curry powder is best when the whole of the aromatics are ground together.

ESSENCE OF VANILLA.

THE labour of powdering the vanilla is much lessened by the use of a small proportion of coarse sand, previously sifted and washed. F. B. Quackenbush (*Amer. Journ. Ph.*) believes that maceration brings out the flavour better than percolation, and that the longer the maceration proceeds, the more delicate will be the aroma of the tincture.

SILVERING IRON.

ACCORDING to a new Austrian patent, iron goods may be silvered by the following process:—The article is first plunged in a pickle of hot dilute hydrochloric acid, and then placed in a solution of mercuric nitrate and connected with the zinc pole of a Bunsen cell, gas carbon or platinum serving as the other pole. It is rapidly covered with a layer of quicksilver, when it is removed, washed, and transferred to a silver bath, and silvered. By heating to 300° C. the mercury is driven off and the silver firmly fixed on the iron.

SALICYLATE OF SODA SOLUTIONS.

WE have at various times, especially in the Dispensing Notes, called attention to the fact that sodium salicylate solutions (especially in alkaline solution) after a short time develop a red colour. S. Demant points out that a slight excess of salicylic acid keeps the solution perfectly, and in no way interferes with the action. To make a 20-per-cent. solution 400 parts of distilled water are heated to the boiling-point, allowed to cool to 30° C., 100 parts salicylic acid added, and 60 parts bicarbonate of sodium introduced, in small portions, with constant stirring; the solution is filtered through absorbent cotton and diluted with sufficient distilled water to make 600 parts.

COLORATION OF AROMATIC SPIRIT OF AMMONIA.

VERY frequently this preparation darkens to such an extent that the mixture is unsightly when compared with one made by observing all the precautions necessary. The deep colour is almost invariably due to the use of commercial alcohol which has been stored in wooden casks. Mr. H. F. Meier states in the *Druggists' Bulletin* that, owing to natural competition, sometimes the inside coating of the barrel with a glue solution is slighted, or done imperfectly, so that the wood is exposed to the action of the alcohol. Even small traces of tannin or other astringent matter can be the cause of darkening when brought in contact with either fixed or volatile alkalis. Its presence can be readily detected by evaporating a few ounces of the alcohol, and then testing with ferric chloride, which produces a black stain on the dish. That this is the case can be shown by the addition of ammonia water alone to the alcohol. The remedy for this difficulty lies in the removal of the astringent matter. The alcohol contaminated is treated with a small amount of hydrated oxide of iron, the precipitate from a single fluid drachm of solution of ferric chloride by ammonia being usually sufficient to remove all the tannin from a gallon. This hint is useful to those who make the spirit without distillation. Thus prepared, the spirit seldom remains colourless. The coloration is often attributed to the essential oil not being distilled along with the spirit, but practice has conclusively proved that if the spirit alone is redistilled (and therefore freed from solid matter such as tannin) the aromatic spirit made from it by mixture does not darken.

LEMON SYRUP.

AN excellent syrup for making lemonade is prepared in the following manner, according to a German paper:—Fresh lemon peel is steeped for twenty-four hours in an equal quantity by weight of alcohol, after which the latter is drawn off by distillation. This spirit of lemon is used as required by adding 30 parts to a syrup made from 500 parts of sugar and 250 parts of water; this syrup is mixed with a solution of 15 parts of citric acid in 30 parts of orange-flower water. Such a lemon syrup is said to be far superior both in flavour and durability to that made either from the freshly-expressed juice or from citric acid and oil of lemons.

CEMENT FOR AQUARIA.

THE following is perfectly satisfactory:—

	By measure.
Whiting	6 parts.
Plaster of Paris	3 "
White beach sand	3 "
Litharge	3 "
Powdered resin	1 "

Mix the ingredients together thoroughly, then make into a putty with the best coach varnish. Only enough to set one glass should be made up at once, as it soon becomes too hard to work. The glass should be thoroughly bedded in the putty and left about a week to harden. Cover the joints with two coats of asphaltum.

Scientific American.

PURE PEPSIN.

WE have little to be proud of in the Pharmacopœia method for the manufacture of pepsin. It is the time-worn and somewhat filthy process of scraping the stomach of the pig, sheep, or calf, and drying the scrapings. A test controls the strength of the product, but it still contains a variable proportion of mucus, and what else, other than the digestive ferments, it would be difficult to say. The *Druggists' Bulletin* states that in drying the mucus undergoes bacterial decomposition with the formation of ptomaines; when mucus decomposes, cadaverine, one of the most poisonous of all the animal alkaloids, is produced, and although there is no evidence that this poison exists in pepsin, it may be there for all we know to the contrary. To obviate this and all other uncertainty our contemporary insists on pure pepsin only being dispensed. There are three or four such products now on the market, and a careful investigation shows that the most powerful pepsin made are quite soluble. Mere insolubility of itself could not be urged as a serious objection, for it might be reasonably argued that such ferment as the pepsin contained would be at once dissolved upon administration, and its therapeutic effect soon be realised.

INJECTION BROU.

"THE NEW IDEA," not satisfied with the formulæ hitherto published for this preparation, has made an analysis of it, and thus reports:—The preparation comes in a bottle of very peculiar construction, made on a private mould, and contains 7½ oz. of a slightly yellowish fluid containing a reddish brown sediment in suspension. Analysis shows the presence of alcohol, acetic acid, sulphuric acid, traces of an alkaloid and a tannin-bearing drug. Just what drug has yielded the tannin it is impossible to say. It is not any of the ordinary tannin-bearing drugs, as none of them yield such a coloured precipitate with the lead and zinc salts. The essential parts, however, are in the mineral astringents and alcohol, and a preparation which is substantially the same may be made by the following formula:—

Tincture of catechu (1 in 16) ..	1 drachm.
Cocaine muriate	10 grains.
Lead acetate	10 "
Zinc sulphate	10 "
Water	6½ oz.
Alcohol	½ "

Dissolve the mineral salts each in ½ oz. of water and mix them. Dilute the tincture of catechu with 4 oz. of water, add the minerals, and then the solution of cocaine muriate in an ounce of water, lastly, the alcohol and water to make 7½ oz.

[We should add that Injection Brou was used long before cocaine was known.—ED. C. & D.]

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

A CHEMICAL INSTITUTE FOR MONTPELLIER.—The legislature has passed an Act, approved by the executive, empowering the city of Montpellier to raise 250,000f. for the purpose of building a chemical institute attached to the Superior School of Pharmacy. The loan is to be for forty years, and the interest not more than $4\frac{1}{2}$ per cent.

NOT ON THE PROGRAMME.—At Perpignan the other night, during a concert-hall performance, one of the electric conductors parted asunder, and lights went out. At the same time cross-contacts got established, which set tables and glasses dancing about and spectators howling with shocks and terror. No one was hurt, however, but all got badly scared.

THE LYONS MILITARY HEALTH SCHOOL.—A law recently passed has authorised the city to raise 10,000,000f. by a loan for a term of forty years, at a rate of interest not to exceed $4\frac{1}{2}$ per cent. The amount is to be employed in erecting a suitable building for the Military Health School and an asylum for invalid working men, in improving the water service, and other minor purposes.

GOOD USE FOR DIAMONDS.—Mme. E. André, who died some two years since, bequeathed her diamonds to the Paris Philanthropic Society, with the request that they be sold and the proceeds applied to benevolent purposes. The sale netted 400,000f., which the Society has employed in founding and equipping a free dispensary on the Rue Jean-Marie-Jégo. The new institution bears the name of the benefactress, and was formally opened last week.

THE COST OF A PHARMACIST'S MISTAKE.—A few months since, as was at the time related in *THE CHEMIST AND DRUGGIST*, an accidental poisoning case occurred at Passy (Paris), whereby M. Dupuy, aged 26, lost his life. The pharmacist, M. Norbert Gaumé, by some unaccountable oversight, dispensed opium pills instead of the quinine prescribed by the physician. He soon discovered his mistake, and tried to correct it, but not in time to save the patient. Last week the pharmacist appeared before the Correctional Tribunal, and was sentenced in three months' imprisonment and 40,000f. damages towards the widow Dupuy.

SEIZING A "BLIND" PRESCRIPTION.—A curious affair recently occurred at Bourges, the most central city of France. A pharmacist of the place, M. Lefèvre, one day received from a customer a prescription so worded as to be intelligible only to favoured individuals. He took hold of the document, and, finding he could not understand it, refused to either dispense or return it. The patient sued him for 1,000f. damages, and has recovered 25f. before a justice of the peace. But now the physician threatens M. Lefèvre with a suit for libel, for the reason that all secret understanding between physician and pharmacist being illegal and punishable by fine and imprisonment, the imputation of the same is injurious. The Pharmaceutical Syndicate of the Cher department have pledged their moral and financial support to M. Lefèvre in case the libel suit be carried into effect.

TO DETECT COTTON-SEED OIL.—Dr. T. Leone, of Palermo, has recommended the following modification of the silver nitrate process, already known. As a test liquor he uses an alcoholic solution containing 1 per cent. of crystallised silver nitrate and one-half of 1 per cent. of nitric acid, which can be applied to solid fats as well as to oils. When a specimen of lard, for instance, is to be tested, a few cubic centimetres of the fat are to be introduced into a test tube, about as much of the solution added, and the whole to be heated for five or six minutes on a water-bath. If the lard be adulterated a brownish-yellow ring will form at the point of contact of the two liquids; when no cotton-seed oil is present no such coloration will take place. The same method is equally efficient for detecting the adulteration of olive oil with cotton-seed oil, only the test-tube is to be kept ten to twelve minutes in the water-bath, after which the presence or absence of a brownish-yellow ring at the point of contact will indicate the presence or absence of adulteration. With pure oil a whitish ring is often observed, and, after prolonged

heating, a greenish hue may develop. But the first, which is simply due to partial emulsion, and the second to chlorophyll, cannot be mistaken for the dark-yellow ring of cotton-seed oil. The test will clearly indicate, it is claimed, as little as 5 per cent. of the adulterant.

WHAT BECOMES OF THE EELS?—At the July 29 sitting of the Academy of Sciences the puzzling question came up again for the second time within a short period. As most-readers of *THE CHEMIST AND DRUGGIST* probably know, the history of the eel, at one of its stages, has to this day remained a profound mystery. We know the fish thrives in fresh water, stays there an indefinite length of time, and often reaches a very large size. It is known, also, that at a certain season many eels leave the rivers for the ocean, to be seen no more; while soon after immense quantities of very small eels swim up the streams and take the place of the slippery departed ones. But what becomes of the emigrants, and where and how they breed, has never been discovered; for no one ever saw an eel's egg, and no one ever caught an adult fish with its sexual organs developed enough to allow propagation. Speaking of the unsolved problem, Academician Blanchard briefly set forth some of the theories proposed. The idea of fishermen generally seems to be that eels migrate to the sea to breed, and there soon after die from exhaustion. On the other hand, some scientists have thrown out the suggestion that perhaps the eel, as we know it, is only a larva which, on reaching the sea, undergoes a metamorphosis, and becomes so different a creature that we recognise it no more. Against the fishermen's notion it is objected that, even admitting the female fish should die soon after parturition—an event scarcely probable with so perfect an animal—there is no reason why the male should disappear also. The second theory has the weakness of being supported by no proof of any sort. But M. Blanchard thought that, until disproved, both opinions are tenable, even the second, which is not at all in contradiction to what we know of fishes. For the present he would read on the subject a second paper contributed by Professor Jourdain, a naturalist who has given a new impetus to the investigations. The professor has observed that female eels are much larger than the male; he also captured in the Hougue bay, near his residence, eels with sexual organs considerably more developed than are ever found in fresh-water specimens; yet it must be admitted they are far from the breeding point. His plan of study for the coming season will be, at the time when the young spawn begin to ascend the rivers, to try and trace them to the place they come from, where, by dragging, something may possibly be learned. M. Blanchard, while unwilling to discourage any sort of investigation, would favour another plan, namely, the ticket method so successfully employed in Scotland and Ireland in reference to the salmon. The process, which could be carried out together with Professor Jourdain's project, is exceedingly simple, and consists in attaching to the body of the young creatures caught in fresh water a slender metallic label by which they can be identified at any future time. It was in this way that British naturalists succeeded in elucidating the wonderful history of the salmon, and most likely the same plan, although more difficult to manage, would answer the purpose with eels. In consequence, M. Blanchard moved that, with the consent of the Academy, a copy of his proposition be presented to the administration, with a request that fishery commissioners and overseers be instructed to aid in furthering its application in practice. The motion having been carried, there is a slender hope that the dark mystery may be unfolded some time or other.

THE INTERNATIONAL CONGRESS OF CHEMISTRY was opened on July 30, at precisely 8.30 P.M., by M. Berthelot, in the Grand Amphitheatre of the Arts-et-Métiers Conservatory. The attendance was large, and included a number of foreigners, but how many cannot be ascertained until the full list has been compiled. The conditions for joining the organisation are quite liberal, no fee of any sort being required, the Government supplying the meeting and committee rooms and bearing all incidental expenses. All that is necessary to become a member is to sign a blank form of adhesion to the Congress. Among the persons present on the opening-night we noticed a Turkish-looking gentleman, two priests, many foreign faces, MM. Friedel and Schlesing, of the

Academy of Sciences, Professor Hauniot, of the Faculty of Medicine, Professors Riche and Jungfleisch, of the College of Pharmacy, Professors Marty and Burcker, of the Val-de-Grâce, and a strong delegation of pharmacists, including MM. Petit, Adrian, Bocquillon, Léger, Juillard, and others. So far the English contingent which is promised has not yet arrived. M. Berthelot having called the meeting to order, in a familiar, almost fatherly, manner, briefly exposed the objects of the Congress now to begin. "Theories are not to be considered," he said, "but only practical questions, such as relate to analytical methods and nomenclature. The last urgently needs revision and improvement. The system hitherto followed has become insufficient. So many new compounds have been discovered that they are bursting through the frames formerly intended and thought wide enough to contain them. This is especially true of the hydro-carbons, and the numberless substituted azo-compounds derived from coal distillation, and used in pharmacy and the arts. We cannot keep on adding syllables and forming endless names for new combinations. A new and clearer system is absolutely necessary, with lines broad enough to last for some time at least." After expressing his wishes and hopes for successful results, the chairman, on behalf of the organising committee, proposed for the various sections of the Congress the names of presidents and secretaries, which were unanimously confirmed. They are as follows:—Section I. Unification of the Nomenclature in Organic Chemistry: president, M. Riche; secretary, M. Bischof. Section II. Chemical Analysis of Organic Bodies: president, M. Joulie; secretary, De Moussy. Section III. Analysis of Alimentary Substances: president, M. Friedel; secretary, M. Bouveau. Section IV. Analysis of Pharmaceutical products: president, M. Petit; secretary, M. Bocquillon. Meetings at 3 P.M. General meetings where the results of section labours are to be presented and discussed will be held on Wednesday at 8.30 P.M. for Section III., on Thursday for Section II., Friday for Section IV., and Saturday for Section I. As most of the pharmacists attending the chemical are also members of the therapeutical congress, they have chosen their hours so that they will not interfere with those of the other meeting. Wednesday and Thursday at 3 P.M. were set apart for considering the questions of cinchona, opium, quinine, chloroform, phenol, pepsin, salicylic acid, and analgesin analysis and testing. On Friday at 3.30 P.M. the conclusions are to be presented before the general meeting for discussion and sanction. On Wednesday afternoon, at the hour appointed, the meeting was resumed, with M. Petit in the chair, assisted by Secretary Bocquillon and MM. Marty, Konya, of Roumania, and Rio de la Loza, of Mexico. The testing and assaying of quinine, cinchona bark, and morphine were the subjects of an earnest exchange of views between Professors Marty and Jungfleisch, and MM. Petit, Bocquillon, Taillandier, Tanret, Léger, and others. In respect to quinine and cinchona assay, the conclusions arrived at were that the Codex tests, as modified by the Paris Society of Pharmacy, and supplemented by polarimetric tests, are necessary, but sufficient for a pharmaceutical estimation. As regards morphine, after a long discussion a committee was appointed, composed of MM. Yvon, Tanret, Bocquillon, and Petit, to embody the views expressed and present them to the general meeting, after which the section adjourned, to take up the other subjects at its next meeting.

A GERMAN SOLDIER has emptied in twelve hours a bottle containing a solution of 300 grains of iodide of potassium in 8 fluid ounces of water, without experiencing any deleterious effects. He must have a peculiar constitution.

COCOA SOAP.—Melt and purify by filtration 1,000 parts of cocoa butter; mix with it 850 parts of soda lye (sp. gr. 1.34), and place in a water-bath; heat and stir until a portion removed from the vessel will completely dissolve in warm water. Add, with constant agitation, 250 parts of common salt, dissolved in 500 parts of water; continue the heat and stirring for half an hour, and then pour into moulds and cool. When cold, remove the soap, which floats on the top, and press out in a cloth. The product should be treated a second time with the solution of salt, and finally washed with water.

EXTRACTS FROM THE REGISTER OF DEEDS OF ARRANGEMENT.

The following deeds of arrangement with creditors has been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1887. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act, making any of these arrangements binding upon dissenting creditors.

Bailey, Henry, Market Place, Warminster, chemist and druggist. Date, July 22; filed, July 25; unsecured liabilities, 255*l.* 4*s.* 5*d.*; composition, 7*s.* 6*d.* in the pound, by three equal instalments, 2*s.* 6*d.* upon execution of deed; 2*s.* 6*d.* September 2, 1889; and 2*s.* 6*d.* December 2, 1889; the two last instalments secured. Total composition, 95*l.* 16*s.* 6*d.*

	£	s.	d.
Baiss Brothers & Co., London	13	4	7
Burgoyne, Burbidges & Co., London	97	9	2
Evans, Lescher & Webb, London	12	0	9
Humby, Mr., Southampton	14		6
Johnson & Co., London	11	15	3
Maw, Son & Thompson, London	11	17	5
Newbery & Son, London	14	10	6
Walker & Co., Bath	10	0	0

Mackenzie, John Alexander, 185 Albert Road, Farnworth, doctor of medicine. Trustee: Frederick W. Briscoe, Bolton, accountant. Date, July 23; filed, July 30; unsecured liabilities, 725*l.* 14*s.* 6*d.*; estimated net assets, 731*l.*; creditors fully secured, 19*l.*

	£	s.	d.
Bank of Bolton (Limited), Farnworth	70	0	0
Julian, Henry, Bolton	18	11	6
Legat, W. H., Bolton	12	12	11
Levy, Dr., Bolton	273	0	0
Mark Hamilton & Co., Manchester	19	12	8
Payne, George, Manchester	18	0	0
Richardson, J., & Co., Leicester	38	2	6
Stranger, J. H. (care of Union Bank), Farnworth ..	70	0	0
Woolley, J., & Sons, Manchester	28	14	3
Warburton, Mrs., Farnworth	21	0	0
Rent	19	0	0

Norman, William Francis, 3 and 5 Bertie Road, Milverton, Warwick, chemist and druggist.

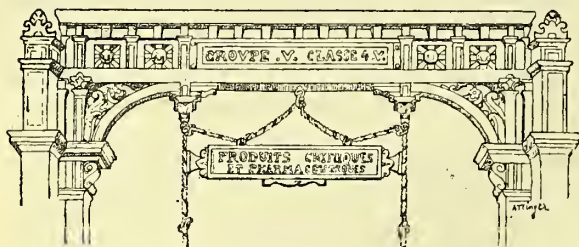
The following are the creditors in this case. The terms of the arrangement were published last week:—

	£	s.	d.
Atkins, John, Leamington	12	0	0
Barber White, W. F., Leamington	21	0	0
Bourne, Johnson & Latimer, London	10	0	0
Chilcott & Co., Leamington	12	0	0
Gilbertson, H., & Son, London	23	0	0
Herrings & Co., London	55	0	0
Leamington Spa Mineral Water Company, Leamington	52	0	0
Leamington Priors Gas Company, Leamington ..	13	0	0
Lloyds Bank (Limited), Leamington	376	0	0
Margrath, W. R., & Co., Leamington	15	0	0
Maw, Son & Thompson, London	38	0	0
Rose, Edgar, Birmingham	14	0	0
Sadler, W. M., Birmingham	22	0	0
Shooter, F. E., Leamington	11	0	0
Southall Bros. & Barclay, Birmingham	19	0	0
Toogood, Wm., London	15	0	0
Vickers, J. & J. Co. (Limited), London	10	0	0
Wilkinson & Co., Manchester	30	0	0
Wyleys & Co., Coventry	114	0	0

LABELLING MICROSCOPE SLIDES.—Not every one stops to think how much more convenient it is to have the principal label on the left-hand end of a slide. We naturally pick up a slide with our right hand, and grasp it by the right-hand end. This covers up the label on that end, and Mr. H. M. Whelply, of St. Louis, tells us that he makes it a practice to place the label on the left-hand end; or, if two labels are to be used, the main one is put on this end and the less important one on the right.

THE PARIS EXHIBITION.

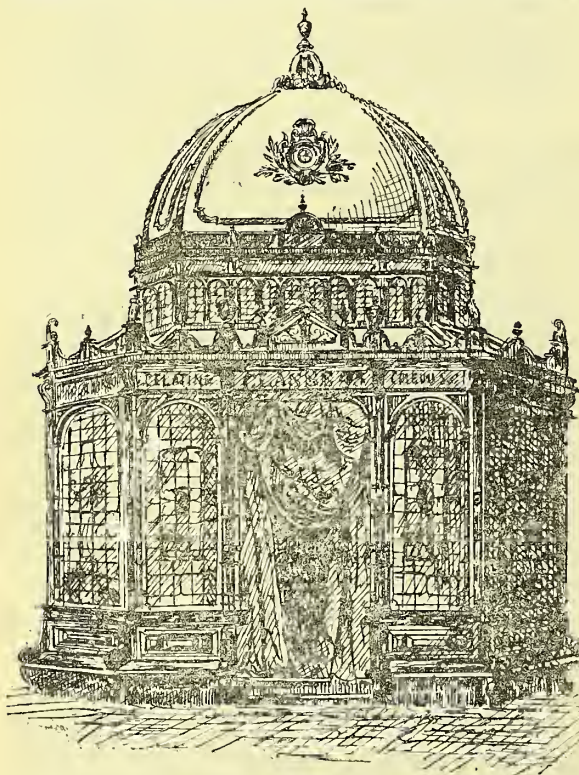
(FOURTH NOTICE.)



FRENCH PHARMACEUTICAL GROUP.

IN our last report we gave an account of the pharmaceutical and chemical exhibits in the British Section. This report deals with the French exhibits of a similar character. We have on a previous occasion referred in general terms to the excellence of this part of the exhibition. In passing from the British Section to that of French pharmacy, one cannot resist half an hour over the delicate china and Venetian glassware. A marvel of glass-blowing occupies a prominent position here; it is a huge ball of glass, compared to which the one in the Royal Institution seems a pigmy. Surely no human lungs can have blown this marvellous "bubble"! We pass on from court to court, and finally we come to the one whose entrances are surmounted by the delicately-designed headpiece of which a sketch is given above.

The exterior is but a mild foretaste of the artistic character of the interior. The Section contains 338 exhibits of a somewhat varied character, for included here are chemical

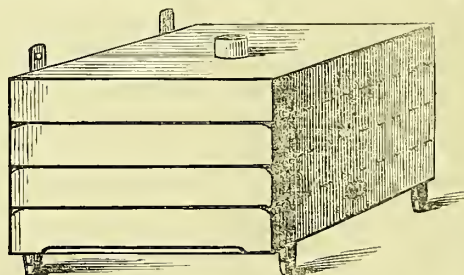


THE COMMITTEE'S KIOSK.

and pharmaceutical products proper (amounting to one-third of the total number of exhibits), colours, soap perfumes and oils, paints and the like, inks, and indiarubber goods, the

whole of which are scattered over an area close upon 1,700 square metres. We have previously stated that the cabinet work in this Section, as in all other French Sections, is uniform in design. There is little pretension about it: everything is made of deal finished in black enamel tastefully relieved with gold. Flat cases divide the space between the walls and the central kiosk. The latter is an exquisitely designed apartment for the use of the committee, and is sumptuously furnished. We have allowed our artist, rather than our pen, to give a true idea of the style of the affair. It is a nice kiosk, jealously guarded at all times by linen-trousered policemen; but there are well-stuffed settees outside it, and there the wearied limbs of the fagged pharmacist may be stretched without official interruption. From here we may glance at the "Exposition Collective. Scientifique des Pharmaciens Français." It looks like a

small object-lesson in the French pharmacy of the last hundred years; and that in a sense. Collective Exhibit. it is, for one of the outcomes of the exhibit will be a volume giving biographical sketches of noted French pharmacists up to the present day. We owe the idea of the collection to M. André-Pontier, who secured the assistance of about fifty fellow-pharmacists in making the collection, which consists of historical apparatus, rare or historical specimens of chemicals, coloured drawings of fungi, French pharmaceutical literature, and other odds and ends, each one of which marks some pharmaceutical or scientific advance which we owe to the pharmacists of France. Of this unique exhibit we gave some account in our issue of June 15, and that requires but little supplementing. One is inclined to think that the apparatus is the most interesting part of the exhibit, possibly because it is associated with some notable discoveries. Take, for example, the apparatus with which Mousson isolated fluorine. It is by no means large—none too powerful-looking for an operation which has frequently been attended with disastrous results, and which is so dangerous that Mousson was completely unnerved after his success. It consists of two platinum tubes supported in a glass vessel by platinum wires connected with glass uprights situated on the outside of the vessel. It is, in fact, not unlike the apparatus ordinarily used for the electrolysis of water; there are wires for the current, and platinum tubes instead of glass ones—the electrolysis of water and the isolation of fluorine being identical processes. Next we have two kinds of apparatus for the synthesis of acetylene, Berthelot's consisting of a large egg-shaped flask open at both ends, which are large enough to admit several tubes, the central one in the globe itself being made of brass. Jungfleisch's flask is so different from this. There are two upright tubes, one of glass, the other of brass, and three double-necked Wolff's bottles. Then there is Pinchon's "Analyseur Gazométrique," consisting of double inverted burette, and flask with three-hole cork for the admission of gas or liquids. Forterre's capillarimètre and several uriomètres which are shown are rather complex affairs, but here are two useful pieces of



apparatus. First we have a cheap hot air chamber ('étuve à courant d'air') designed by Army-pharmacist Coulier. It is made of tinned iron, with little metal projections from each

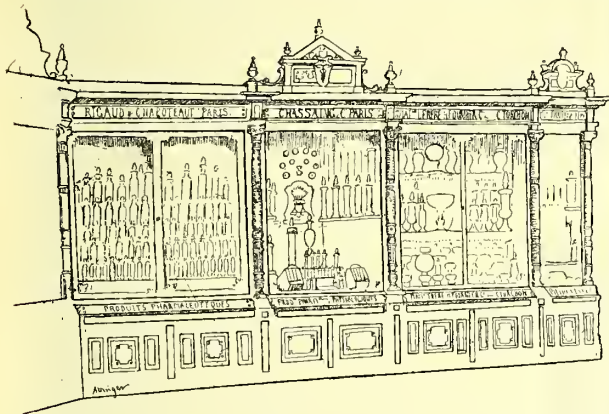
corner at the bottom, which fix in wooden legs to support it. There is a double bottom, so that the warm air is dispersed, and does not impinge directly upon one part of the chamber.

Next there is Robiquet's displacement apparatus—a glass percolator made on a sound principle, with tap to allow preliminary maceration.

We have already enumerated the more important of the chemicals which are to be seen in this collection, and it is unnecessary to go over the same ground again; but we cannot pass on to other matters without referring to the magnificent crystals of aconitine which Duquesnel exhibits here. The bulk of the crystals are an eighth of an inch in length, and are perfect in formation and colour.

We have referred to the style of the wall cases, and here we may fitly introduce a slight sketch of one of the corners. In regard to the style we may say that it is occasionally difficult to tell where one exhibitor begins and the other ends, for the names sometimes read continuously, and the

great similarity in the exhibits helps to produce a degree of uniformity which may be less beneficial to the exhibitors



individually than creditable to the foresight of the committee. Taking the corner shown above as our starting-point,

Digestive we may mention the centre exhibit, that of
Ferments. CHASSAING & CO., 6 Avenue Victoria, Paris, as
typical of a group illustrative of the digestive
ferments. M. E. Chassaing, the principal of this firm, is a distinguished French pharmacist, who for a number of years has made a practical study of pepsin, its preparation and action. The results of his researches we have in a neat volume of fully 150 pages. In six chapters M. Chassaing gives a general review of our knowledge of the soluble ferments, an account of the gastric mucous membrane and its juice, the origin of pepsin and the processes for preparing it, its properties and methods of assay, and the official preparations. The use of the gastric juice of animals as an aid to digestion is of very ancient date, but the first one to make pepsin was Wassmann (1839), whose process consisted in separating the glandular membrane of the stomach, digesting and washing it well with water, filtering the washings (which contain the digestive material), precipitating with subacetate of lead, treating the lead precipitate with sulphuretted hydrogen, thus freeing the pepsin from metallic contamination, filtering and evaporating the filtrate to a syrupy consistency; absolute alcohol was then added, this precipitating the substance which, on drying, constituted Wassmann's pepsin. Since that time a large number of processes have been suggested, and they may all be grouped into three distinct methods, viz.:—

1. The mechanical force, or scraping method;
2. Precipitation of a solution with alcohol;
3. Direct separation of the ferment without scraping or precipitation.

The method which M. Chassaing employs does not fall within any one of these, unless we put it in the third. He first cleans the stomach, scrapes it with a special knife, and

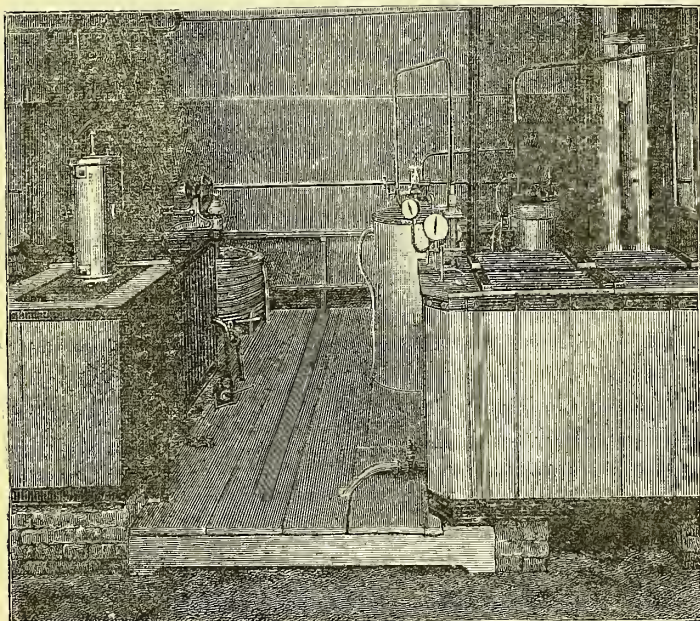
digests the pulp in water acidulated with hydrochloric acid (1·5 in 1,000) for twenty-four hours. At the end of this period the watery liquor is separated from the mucus by pressure, and more water is used, so that the liquor may represent three times the weight of the pulp. The liquor is carefully raised to a temperature of 35 to 40° C., at which it is maintained for six hours; then it is rapidly filtered, the filtrate evaporated to a syrupy consistence, then dialysed for twenty-four hours, and the colloid residue is finally evaporated to the consistence of an extract. Chassaing & Co. do not confine their exhibit to pepsin alone, although that takes the lead. There is, for example, a group consisting of myrosin, jequiritin, papain, emulsin, and pectose, ferments whose action is more or less akin to that of pepsin; with these the pepsins of the calf, fowl, sheep, and fish are associated, and it is noteworthy that the sheep pepsin is much darker in colour than the others. Diastase (in powder), pancreatin, and peptones are exhibited, and the collection of medicinal pepsins is somewhat astonishing to those who are accustomed to regard the agent as a body of uncertain and unfixed strength, for it includes specimens of various standards, from 20 "titre," which is granulated, up to the beautiful paillettes, or scales, of 400 "titre." Some of the specimens are in the condition of a soft extract. In addition to these Chassaing & Co. exhibit elixirs, syrups, and wines of the digestive ferments. Following this we come to the exhibit made by RIGAUD & CHAPOTEAUT, 8 Rue Vivienne, Paris, well known as the manufacturers of Dusart's syrup of the lactophosphates, morrhual, and other notable specialities. The firm state that their peptone is exclusively used by Pasteur for the culture of microscopic organisms. It is made by Henninger's method, and represents five times its weight of lean beef transformed by pepsin. The ferment itself is shown in extract and scales conforming to the Codex method of preparation, specimens of dialysed pepsin being also prominent. We shall return to the other manufactures of this firm. J. A. CHASSEVANT, successor to Collas & Hottot-Boudault, 8 Rue Dauphine, Paris, shows various preparations of pepsin in a striking manner. Pepsin-Boudault is much used in England. It is of the strength "50 titre" according to the announcement in the case, but there are many other samples (moist and dry) shown by the firm, one of them reaching the miraculous strength 1,000 "titre." Peptones we also notice as a speciality of this firm; pastilles they make largely, showing specimens arranged in the shape of an urn on a blue velvet base. Benzine-Collas is another of their specialities. A. CATILLON, 3 Boulevard St. Martin, Paris, whose general chemical exhibit will fall under another heading, has some good specimens of pepsin, pancreatin, diastase, and peptones in his case. P. C. BŒUF, 19 Rue de Launel, Paris, makes greater pretensions in this department, and reaches a high degree of merit with his dry and spongy peptone. His pepsin is well made, is of good colour, and tests up to 400 "titre." The 50 "titre" is a prettily-granulated pepsin. The only exhibit of malt extract which we could find in the French Section was that of DEJARDIN, 109 Boulevard Haussman. The bottles in which it is shown do not permit examination of the extract, but we noticed that the case contained a wine of malt, as well as other maltose preparations, so we conclude that the extract is an unfermented article, although it goes by the name of *bière diastase*.

We have previously referred to the unique display of medicinal extracts in this court. There are about a dozen houses which give them prominence, and it is noticeable that several of that number state (in the catalogue) how they are prepared. It may be said that, on the whole, French wholesale houses give great publicity, so far as extracts are concerned, to the manufacturing methods which they use. This was the case, for instance, when M. L. A. ADRIAN (of ADRIAN & CIE., Rue de la Perle) began to use the congelation process in the production of extracts. Promptly a paper on the subject was communicated to a Paris society. It is evident that an extract from which all water, but a merely

Medicinal Extracts

trivial proportion, has been removed without the application of heat must more closely resemble in properties the crude drug than one in which heat has been used during all the stages of concentration; and, provided none of the active principle crystallises out with the water, there is little reason why the congelation process should not replace the old methods. But that is just where we touch a debateable point. Certain chemicals,

acids principally, which form crystallisable hydrates do crystallise out; and how far this property extends to the chemical principles of vegetable extracts we do not know. It is believed, and experimental proof has been advanced in support of the belief, that the cold-prepared extracts are more active than others; certainly they are superior in appearance and odour. Adrian's method of concentration is simple in principle. The liquid which is to be treated is solidified by an ammonia freezing-apparatus, and the solid blocks are then shaved into a fine snow, which is transferred to a centrifugal separator, such as is used in drying soda crystals. In this separator the liquid extractive matter oozes away from the solid crystals of water, 75 per cent. of the original extract being in this way left in the separator. The liquid extractive is again frozen, and treated in exactly the same manner, the product being a syrupy and highly concentrated liquid, which is easily brought down to a solid consistence by evaporation in a vacuum apparatus at 30° C. All the apparatus used has been specially constructed for Adrian & Cie., and the vacuum part of it we shall describe in a future article. There are samples of the extracts in the Exhibition. Another process depending on the same principle was explained by M. Amédée Vée (VÉE & CIE., 24 Rue Vieille du Temple) to the Paris Pharmaceutical Society in June, and we gave a brief account of it at the time. It is in certain respects a modification of the method proposed by Alfonso Herrera in 1878, and even earlier (1867) by M. Menier for concentrating fruit-juices. The new application of the method has been worked out by M. Vée and his son Georges Vée, and in principle it simply is the separation of the water by crystallisation at a low temperature, solidification of the whole, as in Adrian's process, being prevented by constantly agitating the liquid with mechanical agitators. From the crystalline magma the liquid extractive portion is afterwards removed by a centrifugal separator. The apparatus which Vée & Cie. use is represented in the following illustration.



The apparatus consists of two parts, one (to the right of the figure) for producing the freezing liquid, and the other (to the left) for concentrating the extract. The former portion is made up, it will be seen, of two parts: in the front, covered with wood, is a methyl chloride refrigerating apparatus as devised by Professor Vincent, by which a solution of calcium chloride, made in the cylinders at the back, is cooled down to a temperature of -12° to -18° C. This cold solution is afterwards pumped into the freezing-tank at the left, which is divided into four compartments, each one being capable of holding an extract concentrator, such as that shown suspended in the engraving. The concentrators are made of copper, are nickel-plated inside, and are fitted with mechanical agitators. The lids are, when fixed, thoroughly secure, and do not admit

the calcium chloride solution. When the contents of a concentrator have been brought to the proper degree of concentration, the vessel is raised from the tank, thoroughly washed outside, and the contents transferred to the centrifugal machine, which, by the way, is cooled by the calcium chloride solution from the tanks, which is made to circulate round it. The subsequent stages of the process are similar to Adrian's. M. Vée states that, so far as the principal pharmaceutical extracts are concerned, the frozen liquid separated from the extractive matter contains little organic deposit. Thus, in the case of an extract made from 5 kilos. of digitalis plant, the ice contained only 30 grammes of deposit, and it is questionable if this had any therapeutic activity. The specific gravity of the melted ice varied from 1.000 to 1.004, so that it could contain little or no solid material, especially when we consider that it had been separated from liquids having an initial density of 1.011 to 1.037. This, then, is the process which M. Vée uses for making his extracts. It may be useful to give at another time a description of the centrifugal separators, which, so far, have had little application in pharmacy proper. It is undoubtedly owing to the fine machinery which French pharmaceutical manufacturers employ that they have attained to such excellence in the production of this class of preparations.

Turning now to the exhibits, we have to note in regard to Vée & Cie.'s extracts that they are remarkably transparent, and generally of a creditable character, while the latter comment may be fitly applied to all that they show. M. Vée is also one of the participators in the "Exposition Collective." He did excellent work many years ago in the chemistry of calabar bean, assisting, indeed, in establishing, along with Leven, the identity of eserine, and a specimen of that alkaloid he contributes to the case. One of the most wonderful exhibits in this court comes from the pharmaceutical laboratory of Dausse Ainé (DUBOÉ-DAUSSE & BOULANGER, 4 Rue Aubriot). In this case the extracts are shown in immense masses, pumice-stone like as regards their consistency, and pale as regards colour. France, like other Continental countries, is fond of dry extracts, which are more permanent and more convenient than those which we, or the B.P., erroneously assumes to be of pilular consistence. But latterly the desire has been growing in France for fluid extracts, and there are, of course, some, such as extract of rhubarb, which are best when of the pilular consistence. Of all three kinds Daboé-Dausse & Boulanger submit specimens, and they have adopted a sensible way of demonstrating their quality by taking a few and exhibiting them in thin layers between pieces of glass about 4 inches square, thus showing not only the transparency of the preparations but their colour under as severe a test as can possibly be applied. The result is very satisfactory to the manufactures, as in no instance do the natural characteristics of the plant-products seem to have been impaired. The same remark applies to the dry extracts: that of ipecacuanha has just a tinge of creamy-brown darker than the powdered root, provence-rose extract is of a crimson colour, and the extract of green orange-peel has that beautiful chlorophyll tint which we always associate with uncharred extracts. We speak with all the more confidence of these products from the fact that we have had an opportunity of examining some of those which the firm supply commercially. There is practically no difference between the Exhibition samples and those. In addition to extracts the firm show pastilles, pills, perles, and compressed goods, which are equally satisfactory. Amongst the other exhibitors of extracts are DABASSE FRÈRES & LANDRIN, 24 Rue Simon le Franc, Paris; CH. MONYSSSET, & Asinères (includes concentrated tinctures for dilution); ROUDEL FRÈRES & GENESTOUT, Bordeaux (soft and dried extracts and syrup extracts, a very creditable exhibit), and GRANDVAL, Reims (one of the finest exhibits).

FRENCH BRUSH-MAKERS

are included under "Classe 29." In this section, as in most others, there is great similarity in the outward design of the

show-cases, which are made by a contractor who has given proof of much good taste in the decoration, while the interior fitting up is left to the personal initiative of exhibitors, and in this, as may be anticipated, they can give a lead to almost all comers, though it should be borne in mind that the proportional cost to French firms is equal to, if not greater than, that of the English. The ramifications of the trade in France are somewhat like Sam Weller's knowledge of London—varied and peculiar. The vast majority of brushes are made by the peasantry in the Ardennes, Aisne, and neighbouring departments, middlemen supplying the materials and collecting the goods when made. Being generally small land-owners, the country people are thus enabled to keep an entire independence; for instance, the six weeks or so of harvest-time during the summer keeps them entirely in the fields, much to the wrath of Paris merchants who have indents to fill. There are, naturally enough, a certain number of important manufacturers, and they will be found mostly to figure in the following list.

A. DUPONT & CIE., Beauvais (Oise) and Paris, stand foremost in this section with their display of toilet sets, &c., and considerable effect is undoubtedly added by the elegant way in which the interior of the show-case is arranged, the plush forming the background being attached to carved ebony supports. The principal of this firm has been appointed president of the jury of his section, and is thus supposed to be doubly "hors de concours." The most attractive feature of this show is a toilet set with heavy silver backs, the whole indicating almost unique workmanship, while a complete ivory toilet set of hair, nail, tooth and clothes brushes, looking-glass, &c., with oriental decorations of gilt flowers and birds, is very fine. A variety of tooth brushes (a speciality of the house) of excellent quality form the back of the stand, the patterns of which, together with the show-cards, tend to prove Dupont & Cie.'s important *clientèle* in English-speaking markets.

MAUREY DESCHAMPS, Paris, has likewise an attractive exhibit of well-made goods, indeed he appears to be the only manufacturer who approaches the high-class goods of the last-mentioned firm. His leading lines are a plain ivory toilet set with gold monogram mountings, and a similar set in ebony with inlaid silver monograms. The brushes are all carefully manufactured, and certainly deserve to take a high rank in the estimation of buyers.

E. ROBERT, Méru, Oise, makes a creditable display of good current articles, comprising hair, tooth, and comb brushes. Some of the back decorations of the former are probably intended for a Spanish trade, or any other where colour and general effect are of greater import than continuity of design.

L. LÉONARD GAUCHOT, Paris, shows some good specimens of brushes with plain ivory backs, and, amongst other goods made from the same material, a box cut out of a single piece of ivory, and containing eighteen articles, is ingenious, and possibly useful.

A. LAEDLEIN & SIMONOT (Meinvielle Succr.), Paris, and LOUIS BENOIST, Béthisy-Saint-Pierre, Oise, have each a fair display of household brushes, all well made, though naturally of "French" design.

VVE. ALFRED RENAULT, Paris, have on view an excellent collection of artists' and general brushes for painting, while special attention seems to be paid to the wants of chemists in the form of camel-hair brushes. This firm has a considerable export connection, and its reputation for all classes of goods turned out is of the highest. In the same category with Renault may be mentioned DESCLOIX FRÈRES, Paris, LEOIR FRÈRES, Paris, EUGÈNE GIRARD, Lagny, Seine and Marne, and C. A. PITET AÎNÉ, Paris, all showing well to the front with good varieties of brushes.

L. F. THOMAS, Paris, C. CHOLLETON, Paris, VVE. C. TESSON, Paris, and C. HERBILLON, Charleville, Ardennes, have each good collections of shaving brushes, from the large coarse bristles for the use of cheap barbers, to the finest badger-hair brushes, likely to satisfy the most fastidious buyer.

LÉON BLAISE & CIE., Charleville, Ardennes, come well to the front with their hair, clothes, and painting brushes; while H. BAUDRY FILS takes the lead in dusting brushes, having a pretty collection of feathers imported direct from the Argentine Republic, Uruguay, &c. However, HENRY OLLIVON, Paris, and J. E. DURUP, Paris, follow very closely in this line. E. MORE, Paris, and H. E. MOUTIÉ, Paris, cater for the ladies with a very varied and attractive collection of

powder puffs. A. CHEVILLE & FILS, Paris, make an exclusive exhibit of hair brushes, which are supplied largely to the French army and navy, and have received awards at various times since 1855. HENRY DUFRENEY, Paris, VANY FRÈRES, Charleville, Ardennes, A. F. SARRE, Châlons, Marne, ROQUET & PAPIN, Rouen, and CAHEN FRÈRES, Paris, devote themselves to high-class household brushes, and to good current lines of hair brushes. CLOVIS A. DEBRYE, Paris, has an excellent lot of his hair, tooth, nail, and clothes brushes, the quality of which is sufficiently well known in England to dispense with further remarks. DUMAS-GARDEUX, Paris, displays his metallic toilet brushes, and the MONVILLE PHIBROLITHOID COMPANY (LIMITED), Paris, have combs, brushes, &c., made from their special material.

Other countries do not show up very well in this branch, Belgium being represented by LOUIS HORTER, Brussels, with a small exhibit of coarse brushes, and EDOUARD DE RYCKÈRE AÎNÉ, Iseghem, with similar goods, with the addition of a set of well-made artists' brushes. GIRONA & CIE., Barcelona, should represent the Spanish trade, but have not yet put in an appearance, and will probably now refrain from so doing. JOH. TAUBER & FILS, Vienna, stand alone in the Austrian Court with painting brushes, and EM. XANTHAKIS, Athens, shows, by a varied collection of brushes, what is being done in Greece. From the United States L. C. ABRAHAM BROTHERS & CO., Cleveland, make a fair display of wire brushes and brooms. The HORSEY MANUFACTURING COMPANY, New York, have their felt tooth-brushes, and J. C. BAILEY & CO., Boston and London, are well to the front with their popular rubber brushes. In the Norwegian Section the FABRIQUE NORVÉGIENNE DE BROSSES & PINCEAUX, Christiania, have a small stand. Portugal has samples from VVE. DE ANTONIO RAYMUNDO CARVALHO and JOAO BAPTISTA CHAMPLON, in the Pavilion on the Quai d'Orsay. Serbia shows some specimens emanating from the MANUFACTURE ROYALE D'ARMES DE KRAGUYEVATZ, principally for army use, and JACQUES FLAECHEER, Geneva, figures in the Swiss Department. In addition to these, unimportant displays will be found in the Uruguay and Argentine Republic Pavilions.

WILLS OF DECEASED CHEMISTS.

The will (dated February 25, 1869) of the late Mr. Arthur Cooper, chemist and druggist, of Ashby-de-la-Zouch, who died on January 6, 1889, was proved at Leicester on April 10, 1889, by Mrs. S. Cooper, the widow, and sole executrix. The gross personal estate amounted to 1,167*l.* 12*s.* 3*d.*, and the net to 673*l.* 13*s.* 10*d.* The testator revokes all previous wills, and gives and devises to his widow absolutely all his property, real and personal.

Letters of administration of the personal estate of Mr. B. Palin, late of Bishopwearmouth, who died on January 7, 1889, a widower and intestate, were granted, on January 29, at the District Probate Registry, Durham, to Mr. W. H. S. Palin, of Bishopwearmouth, druggist, the son and one of deceased's next-of-kin. The gross value of the personal estate amounted to 1,565*l.* 8*s.* 4*d.* The sureties are Messrs. Thomas Doncaster and Thomas H. Campbell, both of Bishopwearmouth.

Letters of administration of the personal estate of the late Mr. Robert Walker, of Birmingham, chemist and druggist, who died on December 24, 1888, intestate, were granted at the Birmingham Probate Registry on January 17, 1889, to Mrs. E. T. Walker, the widow of the deceased. The gross value of the personalty amounted to 80*l.* There are no leaseholds. The sureties are Miss Annie Walker and Mr. Howard Walker, both of 95 Smallbrook Street, Birmingham.

The will (dated May 19, 1887) of the late Mr. T. A. Wedge, chemist and druggist, of Wolverhampton, who died on August 3, 1888, at The Ferns, West Bournemouth, Hants, has been proved at the Principal Probate Registry, London, by Mrs. A. H. Morton, the sole executrix, to whom the testator bequeaths the whole of his estate, both real and personal, including all his furniture and effects, and a policy of life insurance. The gross personal estate is declared to amount to 97*l.* 1*s.*

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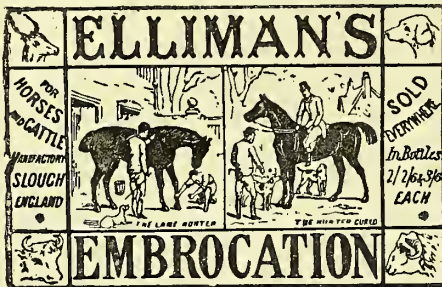
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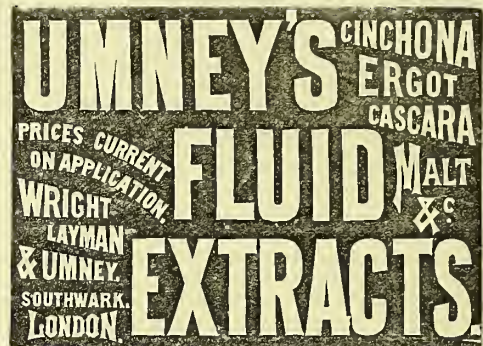
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See DIARY, 1889,
Pages 17 and 18.

EDITORIAL NOTES.

THE CONGRESS SEASON.

MODERN critics have discovered that congresses, conferences, and talking associations generally are very much less influential for good than they profess to be, and are, in fact, a peculiarly wasteful way of getting done any piece of work at all. Consequently it has become the fashion to pour upon them

the gentle ridicule in which the newspaper scribe is an adept, and the result is that we are having a year of congresses altogether unprecedented in scientific, social, or political history. The Paris Exhibition is mainly responsible for this state of things, and it must be admitted that such an occasion is well suited to bring together with advantage people with the same interests, thinking in like grooves, or following similar occupations. Some eighty of such Congresses have been arranged in Paris this summer, and when it is remembered that each has its president, its vice-presidents, its secretary or secretaries, its "bureau," in fact, as the French comprehensively term the official body, it may be judged what a quantity of innocent pleasure has been disseminated. There is no doubt that Newcastle will bring together a powerful meeting of British pharmacists, but it is doubtful whether many of these, and perhaps some others, would not have been thankful to our own "bureau" if they could have inspired themselves with the wild enterprise of meeting this year in Paris, and taking stock of Tyneside another year, when the hotels would have been gladder to receive pharmaceutical customers. Our turn in Paris is just now. Our correspondent there gives some account of the commencement of the Chemical Congress, which opened on Wednesday, under the presidency of Professor Berthelot. This congress will be overlapped by that on therapeutics and materia medica, which lasts from Thursday to Saturday, winding up with a grand dining performance on the Eiffel Tower. It will be found that pharmacy takes a prominent position in both of these Congresses. In the latter we find our old friend the International Pharmacopœia turning up. M. Schaer, of Zurich, is to report on the unification of the weights and measures employed in formulæ, and on the utility of an International Pharmacopœia; M. Chapelle, of Lyons, is to expound the condition of this great question since the Brussels Congress, and other pharmacists have advised the Committee of their intention of taking up their parable on this unfailing topic. That we shall get some gleanings of valuable facts from the discussions to be reported is beyond question; but the circumstance that a great many papers will get clothed in print which could not otherwise attain to that honour is at once the strength and the weakness of these Congresses. Chemists may rely that all of them will be carefully watched by representatives of this Journal.

FOREIGN TRADERS IN JAPAN.

SEVERAL reports have been published this week in a more or less official form to the effect that a treaty is on the eve of completion between the United Kingdom and Japan, under which the entire territory of the latter empire will be thrown open to British traders. Similar treaties have been already completed with Germany and the United States, both of which countries have, in fact, enjoyed the advantages now about to be extended to our countrymen for nearly a year or so. The news of the complete opening up of the Japanese islands to our merchants, if confirmed, cannot fail to be a matter of very considerable importance to British exporters, whose Japanese trade, though it has expanded wonderfully during the last ten years, has hitherto been hampered by many very obvious restrictions. As a matter of fact, there has never been any direct trade between the Japanese consumers and the European merchants. Foreigners in Japan, as in China, have been compelled to reside for trading purposes in a comparatively small number of settlements along the coast-line, though we believe they have been allowed to travel more freely through the country as tourists than would have been the case in China. They have their

own consular tribunals, which ensure that justice is dispensed to them to some extent according to Western notions, although its proper administration is rendered rather difficult by the complete absence of legal training of most of the European consuls. It appears to be one of the conditions of the throwing open of the entire country that Europeans shall renounce the right to claim trial by their own tribunals, and this circumstance proves, we should think, that the advantages to be reaped from unrestricted trading in the country must be very considerable, for, no matter how modernised the Japanese may have become of late, the idea of allowing our countrymen to be subjected to the jurisdiction of laws framed by law-makers of an entirely different way of thinking to our own is not one which could have been acceptable to our Foreign Office without a very substantial *quid pro quo*. It has not hitherto been lawful for foreigners to own land in Japan outside the narrow limits of the foreign quarters of the trading ports, nor have they been permitted to enter into business partnership with natives. Europeans could only trade with Japanese through the medium of certain native brokers or interpreters licensed for the purpose, whose mode of conducting business for their employers appears to have generally been the reverse of satisfactory. That such restrictions must ultimately break down in a country so progressive as Japan cannot be a matter of surprise, and we should think that in a very short time these regulations would have become so irksome to the Japanese traders themselves that their removal would have been effected without any special efforts or concessions on our side. All kinds of industries are growing up very quickly in Japan, the manufacture of cotton and silk goods, glassware, matches, carpets, medicinal preparations, ale, &c., being particularly on the increase, and the proper development of these industries requires the aid not only of European machinery, but also of Western capital and business management. Moreover, the formation of joint-stock companies—a form of enterprise unknown in Japan until a short time ago—is progressing apace, and all these undertakings will be benefited if Europeans are more freely permitted to take part in them. From another side it is stated that the great objection to the satisfactory settlement of the question is the fear which animates the Japanese that similar freedom would have to be extended to the Chinese, into whose hands, it is believed, the trade of Japan would quietly pass if they were placed on an equal footing with Japanese, a fear for which those who have resided in the countries think there is some foundation, though outsiders might be disposed to consider the average Japanese fully capable of coping with the Chinese in matters of business. So far as the trade in medicinal drugs is concerned, there does not seem any great room for extension of that branch of commerce in Japan, as the natives themselves are rapidly acquiring the art of preparing all pharmaceutical preparations; but there seems to be a very large opening for increase in the trade in technical drugs and chemicals and in dyestuffs, and those departments our exporters will certainly find it remunerative to cultivate.

EAU DE COLOGNE.

Of all the perfumes which have ever been compounded none has yet attained the degree of popularity which the Kölnwasser of the ancient house of Farina has unquestionably secured. First designed as a perfume, it has in the course of a dozen generations or more become an antiseptic, a medicine, and, in these latter days, a beverage. Perhaps it is too narrow an appellation to call it a perfume; it still holds its position in that respect as the one scent

popular everywhere. Although nowadays perfume users demand, besides articles of a more expensive nature, something with an individualism about them, such as the odours of the rose, the lily, and the violet, or combinations in which the breath of a thousand flowers is pressed into small bulk, eau de Cologne is still an indispensable addition to the toilet table of the fashionable lady. It is too late now to comment on the cool way in which the world generally has appropriated the title, and perhaps, after all, the multitude of imitators have principally helped to promote the popularity of the original. Anyway, it was a happy idea of the firm from whom we received the formula published last week to gather from the drug trade, by a tempting offer, the recipes which are now in common use; and we should have liked to have had the privilege of publishing more than the one formula which was sent us. Doubtless many in the trade have during the past week tried the prize formula, and come to the conclusion that *their* eau de Cologne is a better article. Every chemist's eau de Cologne, like everybody's first baby, is the best that exists. We should not be so unwise as to dispute that, and we cannot get out of the fact reported to us, that the formula which we published last week is the best of 219 submitted to Messrs. Gosnell. A very good authority states that eau de Cologne can only be of the first quality if it contains oil of lemon and grape spirit. We know, also, that the Cologne makers—the Farinas—are careful to distil the article, and to keep it for a year in bulk before it is bottled. The presence of neroli is, of course, essential; that is the characteristic odour of the “water,” all the other essences in it being in the nature of mellowers. There is a universal belief that none of the imitations of the genuine article approach it in delicacy. This is probably due to the fact that the imitations are more charged with essences than the genuine, which is exceedingly weak in everything except spirit. This is where the prize formula scores. Compare it, for example, with spiritus adoratus, U.S.P.—an official eau de Cologne—the formula for which is:—

	Parts.
Oil of bergamot	16
„ lemon	8
„ rosemary	8
„ lavender-flowers	4
„ orange-flowers	4
Acetic ether	2
Water	158
Alcohol	800

Here we have a compound not unlike the prize one, except that the American spirit contains lavender in place of origanum, and acetic ether as a beneficial addition for sick headaches. The U.S. Pharmacopœia errs, also, in directing the preparation to be filtered, for filtering is fatal to the delicacy of eau de Cologne. Moreover, the proportion of essences to spirit (about 1 in 25) is much too large, and it is here that the prize formula has the pull; but even it errs on that point. Ten years ago we published a formula for an eau de Cologne which contained only about 1 part of essence to 70 parts. The product, with some slight modification, was shown by one of our Australian subscribers at the Sydney Exhibition in the following year, and it secured the gold medal. This formula therefore deserves to be placed along with others. It is:—

	Parts
Oil of bergamot	7
„ citron (citrus medica)	17
„ neroli petale	10
„ neroli bigarade	3½
„ rosemary	7
Grape spirit	3,000

Although this formula breaks away from the standard in giving oil of citron instead of lavender, it is in this respect that the superiority of the product manifests itself. There

are few oils so liable to adulteration as lemon, and even the genuine oil has not the perfuming basis which citron oil possesses, while the latter has the characteristics which make lemon useful in eau de Cologne. It is necessary to note, too, that the perfume must be derived mainly from the orange family; rosemary is an essential accompaniment, but all other odours, such as musk, civet, and cloves, which some are apt to load it with, are injurious to the refreshing character of eau de Cologne. Origanum is a rare constituent, and we cannot yet say that it is pleasing. It will doubtless tone down by age, and give a character which is in no other way obtainable, except perhaps with oil of amber, an odour which develops the strength of the principal essences. Many good formulæ are spoilt by the use of improperly rectified spirit. Cologne or grape spirit, exclusively used by the Farinas, is understood to be the first runnings from the still, and the makers take the precaution to rectify it themselves as well as to distil the perfume. These are important factors, for impure spirit contains aldehyde and other bodies which seem to combine with or decompose the essential oils, and thus alter their fragrance. Grape spirit cannot be made any purer than grain spirit, and provided the latter is redistilled with care, there is no reason why it should not yield a satisfactory eau de Cologne. Lavender water—good old English lavender—has a kinship with eau de Cologne, and that in nothing more than the variety of formulæ. Is it possible, we wonder, to make some kind of unification out of the diversity? Will those who read send us their formulæ, so that we may try?

KEEPING OUR AIR PURE.

WHEN the Alkali, &c., Works Regulation Act was passed in 1881, it was supposed that the result would be that the atmosphere in the districts where such works are situated would be considerably improved, and, consequently, that vegetation would have a better chance in the struggle for existence, and the sanitary conditions of human dwellings would be advanced. In all these respects the Act has been a success. But perhaps the most notable result is the effect which the Act and those which have preceded it have had upon the manufactures which they control. This was not anticipated by manufacturers, but now one of the principal of them (Mr. A. M. Chance) has stated that “Government inspection has not only led to material improvement in the general management of chemical works, but it has also been in reality a distinct benefit to, rather than a tax upon, the owners of such works.” This expression of opinion is substantiated by the chief inspector under the Act, whose report for last year has recently been laid before the Local Government Board. There are 1,057 works in the United Kingdom which are visited by the inspectors, and in only two of these during 1888 did the neglect to carry out the inspectors' warnings become so flagrant as to call for legal interference; viz. in the case of Thomas Farmer & Co. (Limited), Victoria Docks, E., who were fined 20*l.* and costs for failing to use the “best practicable means” for preventing the escape of acid gas from manure plant; and in the case of Joseph Fison & Co., Bramford, who were fined 50*l.* and costs for excessive escape of acid gas from sulphuric-acid plant. There were seven other cases, but these were simply for failure to register under the Act. It is very evident, therefore, that from a public point of view the Act is splendidly successful, and from the practical or scientific side it is no less satisfactory. Of the total number of chemical works (1,057) 866 are registered in England, 131 in Scotland, and 44 in Ireland—a decrease in the case of Scotland of 8, and in Ireland of 2 from the previous year, while England has

increased by 1. This must not, however, be taken as a sign of diminished production, because there is a tendency for the larger works to increase in size and for the smaller ones to close their operations. The principal nuisances which the inspectors have to prevent are the escape of hydrochloric acid gas from alkali works, and of sulphurous gas from vitriol and manure works. The Alkali Act forbids the manufacturer to allow the escape of more than 5 per cent. of the hydrochloric acid which he produces, or that that acid must not exist to a greater extent than 0.2 grain in 1 cubic foot of the air, steam, or chimney gas which accompanies. The inspectors' figures for last year show that the percentage of the acid which escaped amounted to only 1.96 of the total produced, which is equal to 0.089 grain per cubic foot, and much below the figures for previous years. The figures in regard to sulphurous gas are equally satisfactory. The Act allows 4 grains of sulphuric anhydride (SO_2) per cubic foot to escape into the air, and last year's average was only 0.737 grain, or less than a fifth of the limit. Of course it is now the aim of the Leblanc alkali manufacturers to reduce the escape of hydrochloric acid to the lowest possible amount, as their profits depend solely upon the sale of chlorine products, soda products being sold at a loss. In this connection it is interesting to note that the amount of common salt manufactured in the United Kingdom in 1888 was 2,039,867 tons, and of this nearly 600,000 tons were taken by Leblanc soda makers, and over 200,000 tons by the ammonia-soda makers. The figures are very largely in excess of previous years, and indicate a gratifying growth in trade. The salt used in the Leblanc process yields the hydrochloric acid, that in the ammonia-soda method none, so that we may put down the theoretical production of acid as 380,000 tons, 7,600 tons of which was allowed to escape. What was a mere trace in the chimney gases amounts, therefore, to a good round figure at the end of a year, and if it were converted into bleaching-powder it would be worth nearly 150,000*l*. These figures are, it should be understood, based on theory, but they serve to show to what importance a gas has now reached which twenty-five years ago was a perfect incubus to the manufacturers, and wrought desolation in the country-sides miles and miles around the producing works. There has long been an expectation that the ammonia-soda makers would add the manufacture of bleaching-powder to their process, but they appear to be as far as ever from that result, and meanwhile the Leblanc makers are honestly striving to utilise every atom of the valuable material which they handle. Hence the eagerness to recover the sulphur from tank-waste by one or other of the few workable processes which have been proposed. This waste contains from 11 to 15 per cent. of sulphur, and when it is stated that the total amount of tank-waste produced annually is about 750,000 tons, containing about 100,000 tons of sulphur, it will be seen how large is the reward held out to the successful manipulator. Moreover, the value of the sulphur that might possibly be saved is not the only prize held out to those who can successfully deal with the waste, for this material is not only thrown away as useless, but much expense is incurred in the throwing. In Lancashire and in other inland districts land must be found on which to deposit it, and the act of depositing is costly, for unless it is beaten together so as to exclude the air, an intolerable nuisance arises from it. The cost of haulage and deposit on land varies, according to the district, from 1*s*. to 1*s*. 6*d*. a ton. In Widnes it is about 1*s*. In the Newcastle district the practice is to carry this material out to sea at a cost of about 4*d*. a ton. Mr. Chance's process for the recovery of sul-

phur from the waste signalises the centenary of the Leblanc process; Parnell and Simpson are following in his wake, and lately Mr. F. Gossage, of Widnes, has been working on a process for the production of alkali, which enables him to save the sulphur of the sulphuric acid. In his process a mixture of 70 parts Leblanc salt-cake (sulphate of soda) and 30 parts common salt is mixed with coal and heated in a furnace, and so reduced to sulphide of sodium. The resulting "ash" is then dissolved in water and exposed to the action of carbonic acid, when sulphuretted hydrogen is given off, to be dealt with as in Mr. Chance's sulphur process, while bicarbonate of soda is formed and separates by precipitation from the solution of undecomposed common salt. Ere long it is expected this new method will be in active operation in some Leblanc works, the plant of which will, in all probability, be utilised. It has these great advantages:—The absence of lime, the recovery of the sulphur used in the first instance, and the consequent absence of the objectionable tank waste. Thus a bright promise is held out that the days of alkali waste are numbered, and that the air in certain parts of Lancashire will be more balmy than it has been in the memory of the oldest inhabitant.

E. Enjalbert, Paris, shows in the Photographic Section of the Exhibition a novelty in his branch which will certainly attract considerable attention from professional and amateur photographers. This consists in an apparatus by which any person may obtain his likeness by placing a piece of money (the inventor asks 10*c*. only) in a slot and sitting a few seconds in an arm-chair. The entire operation is worked automatically, without the aid of an attendant, and in less than five minutes the portrait is produced, scarcely as much trouble being caused as in obtaining a stick of chocolate at a railway station. Almost every detail of the apparatus gives proof of considerable inventive genius, and there is no difficulty in knowing how long to sit, for the first function of the machine is to put forward the notice, "Get Ready!" then follows "Attention!" meaning that it is necessary to keep the eyes on a conveniently-marked spot, and a bell rings whilst the photograph is being taken. Owing to the vibration inseparable from the light ironwork of the Exhibition galleries, the apparatus cannot work constantly. This is unfortunate, as the jury and all who have seen it are unanimous in acknowledging the value of Monsicur Enjalbert's invention.

* * *

In reporting particulars of a fatal case of poisoning with hydrochloric acid, the victim being a boy of 7, to the *British Medical Journal*, Dr. D. W. Finlay, F.R.C.P., of the Middlesex Hospital, says:—"Perhaps the most important point which emerges from its consideration is the manner in which the poisoning occurred. Deaths from accident and negligence, in which one of the corrosive acids has been the fatal agent, occur with alarming frequency. In the fiftieth annual report of the Registrar-General (1887), the deaths recorded under this head from sulphuric, nitric, hydrochloric, and carbolic acids amount in number to thirty-six; cases of suicide by the same four poisons numbering forty-eight. It seems, therefore, the duty of the authorities responsible for the law regulating the sale of poisons to frame rules which would render such a case as that above narrated scarcely possible. The culpable recklessness or ignorance which is shown in the sale to all and sundry, in oil-shops, of the most destructive poisons which happen to be in use in various trades or for disinfecting purposes, might at least be checked if it were made a penal offence to sell such substances in any but bottles of a particular pattern and colour, labelled 'Poison,' since in most instances the accident occurs from the poisonous liquid being placed in bottles which ordinarily contain beverages in common use. As the Privy Council have already refused to add carbolic acid to the poison schedule of the Pharmacy Act, the same result

Mineral
Acids as
Poison.

would no doubt follow any application regarding sulphuric, nitric, and hydrochloric acids; hence these poisons could still be purchased with such freedom as to be available for purposes of suicide; but careless persons and children at least deserve such reasonable protection as would be afforded to them by a regulation like that suggested."

* *

A Defective Pharmacy Act.

The Pharmacy Act of New South Wales does not wear very well. For some time past the New South Welshmen have shown a singular taste for "Rough on Rats," and as this remedy for all the ills of life is little besides pure arsenic, it has at least the merit of certainty. In order to check the too free indulgence in this luxury, "Rough on Rats" was gazetted in the usual form into the Poisons schedule. But the first time an attempt was made to punish a vendor who had not observed the necessary formalities, it was found that the proclamation was *ultra vires*, as clause 7 of the Act exempts from its operation "poisonous mixtures for the destruction of vermin." It is a curious complication though that the 4th section enacts that "it shall not be lawful to buy or sell any poison for the avowed purpose of destroying rats or other vermin infesting houses, unless the purchaser be a householder." But the framers of the Bill thoughtfully saved the courts trouble in regard to this section by omitting to attach any penalty to its infringement. The Sydney papers, which comment in severe terms on the failure of the Act to protect the public, account for its imperfections by explaining that those who drafted it had their minds fixed on the object of getting an official status for the Pharmaceutical Society, "as the association of druggists is learnedly self-styled."

* *

Lady Wholesale Druggists.

Writing on the subject of the right of women to vote in the election of "juges de commerce"—commercial judges elected in France by the trading classes for the purpose of deciding trade disputes, investigating failures, &c.—M. F. Gouillon advocates the extension of this franchise to female traders. It is a matter of general notoriety that Frenchwomen of all classes are very often found in their husband's counting-houses or factories, acting as book-keepers or manageresses, and this applies not only to the retail, but also, in quite an equal degree, to wholesale and manufacturing businesses. Under the present system these ladies are allowed to trade upon their own responsibilities, and upon exactly the same footing in every other respect as men, but they are not permitted a voice in the election of the judges who administer the commercial laws. A Bill to remove this disqualification has passed through the Chamber of Deputies this session, but it has been rejected by the Committee of the Senate, and is, consequently, shelved for the time being. From M. Gouillon's article it appears that there are several ladies at the head of well-known Parisian wholesale houses. Mme. Vve. Lesault, the widow of the late proprietor, personally conducts the fortunes of the wholesale drug house in the Rue de la Verretrie, which ranks among the most important firms in Paris; and Mme. Vve. Bréton similarly directed the wholesale drug firm in the Rue Payenne until the recent admission of her son into the partnership. Mme. Caillat was the active head of a large wholesale drysaltory business in the Rue de Jouy, which she conducted for many years with great success, until she disposed of it to a Mr. Biard; and the important wholesale drug and herb house now owned by G. Coutela, which has a very large connection abroad, was for a time managed entirely by the founder—M. A. Auber and his wife—M. Auber himself visiting the provincial and foreign customers, while Mme. Auber transacted the Paris business and superintended the office.

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The Sale of Methylated Spirits.

A Revenue Bill which passed through committee of the House of Commons on Wednesday contains the following clause:—"The sale of methylated spirits between the hours of ten of the clock in the evening of Saturday and eight of the clock on the following Monday morning is hereby prohibited, and any person selling methylated spirits in contravention of this section shall for each offence, in addition to any other fine or penalty to which he may be liable, incur a fine of 100*l*." When this clause came under consideration Sir

Wilfrid Lawson asked what was its object, and Mr. Jackson explained that it was inserted because it was believed that in Scotland, in consequence of the Sunday Closing Act, methylated spirits were bought for drinking purposes. Sir W. Lawson thereupon moved to insert the words "or any other intoxicating liquor" after the words "methylated spirits." The chairman, however, ruled that the amendment was out of order in a Revenue Bill, unless the object were to protect the revenue.

AMERICAN PAPERS.

IN the following we give abstracts of a number of the papers which were read at the meeting of the American Pharmaceutical Association, held at San Francisco in the last week of June. The papers were, on the whole, of a practical character, and, as previously stated, the meeting seems to have been a success.

HOW THE SAN FRANCISCO CHINESE MAKE SMOKING OPIUM.

An interesting paper was communicated on this subject by Mr. John Calvert, of San Francisco. We give an outline of the process, and may mention that the essential apparatus employed consists of two charcoal fire-clay furnaces, about 15 inches high and of about the same width, open on three sides; several brass pans, a brass ladle, and several tin ones; a large spoon for skimming; a gridiron, two pairs of pincers for lifting the pans, some fibre brushes, buckets, basket strainers, muslin for straining, heavy sticks to be used as pestles, several spatulas about a foot long and 3 inches wide made of oak or ash, and a steel-bladed scraper. Using Turkey opium, the balls are first steeped in water to soften the surface, from which the leaves and grit are then removed by the hands. The opium is then gently heated in water, being constantly kneaded with the wooden pestle until it is homogeneous, when it is uniformly spread over the inner surface of the brass pan, and the heat continued until the opium is so solid that the pan can be turned up. The direct heat of a small fire is now applied to the opium until it is hard. The drying process is not yet complete, however, for the opium is now scraped off the pan, and in thin layers dried upon the gridiron until it is crisp and crusty. The dried opium is now steeped in warm water over night, the infusion strained off in the morning, and the residue again treated with warm water. These infusions are used for the extract, subsequent washings being employed for the extraction of the next batch. There seems to be no precise rule as to the quantity of water for making the infusion, the crusts are merely covered. The infusion is then mixed with some egg albumen, and a part of it is placed in the largest of the brass pans over the naked charcoal fire, and is heated, skimmed, and boiled constantly; fresh portions of warm infusion containing albumen are added from time to time as the bulk diminishes. When all the infusion has been added, and the evaporation has proceeded as far as is considered to be necessary, the pan is removed from the fire, and the extract constantly stirred by means of a wooden spatula in a current of air produced by fanning until cool and uniformly mixed. The yield of extract varies; 18 lbs. of the first quality Turkey opium generally giving about 10 lbs. of this extract. Mr. Calvert states—contrary to the common belief—that there is no appreciable difference in the yield of morphine when opium has gone through this barbarous process. Whatever changes may take place among the other proximate constituents is not known, but the natural morphine salts, protected by extractive, are not decomposed, or only to a very small extent, by such a heat as is necessary for the desired alteration of the valueless or inert matters contained in opium.

IS IT NOT ADVISABLE TO DROP FROM THE UNITED STATES PHARMACOPŒIA ALL COMPOUND GALENICAL PREPARATIONS?

A strange question this, and to it Professor Joseph P. Remington replied, reminding us in the course of his paper that the British Pharmacopœia, under the name of *confectio opii*, retains all that was valuable in "poor old theriac," by

making it from opium, black pepper, ginger, caraway, tragacanth, and syrup, while the United States and German Pharmacopœias omitted it entirely in the last revisions. He came to the conclusion that all compound galenical preparations, which have not thoroughly established their usefulness throughout the country, should be dropped from the next revision of the United States Pharmacopœia, and that none should be admitted to that authority except such as will stand the same test of extended usefulness; and if admitted, the processes must commend themselves to the practical worker as models of simplicity and elegance.

EXTRACT OF NUX VOMICA

of the United States Pharmacopœia is, like the British, supposed to contain 15 per cent. of total alkaloids, but as it occurs in commerce Mr. W. Simonson found 16.5 to 17.25 per cent. to be nearer the mark. The author made some of the extract himself, using the official menstruum, 80 per cent. alcohol, and he ascertained that 16.5 per cent. is a fair percentage of alkaloids. Something like this will have to be agreed upon for the next Pharmacopœia.

CANTHARIDIN IN PHARMACY.

Mr. F. A. Grazer had to prepare, amongst other things, vinegar of cantharides according to the British Pharmacopœia, and was impressed with the tedious character of the process, especially that part requiring percolation, which was exceedingly slow and unsatisfactory. He tried cantharidin, and the results were the basis of a paper to the meeting. A vinegar equally efficacious was readily made by simply dissolving cantharidin in a mixture of glacial acetic and ordinary acetic acids, corresponding to the menstruum used in the preparation. But, as cantharidin is rather dear, Mr. Grazer recommended his fellow-pharmacists to make it themselves by percolating the powdered flies with chloroform, recovering the greater part of the chloroform for future use by distillation. The fat can be removed after evaporating the remaining chloroform by means of carbon bisulphide or petroleum ether. In this manner cantharidin is obtained sufficiently pure for pharmaceutical purposes. The product may be used for the preparation of cantharidal oil according to Dieterich's formula modified by F. Eger. For this 0.3 gm. of cantharidin is dissolved in 20 gm. of castor oil and 40 gm. of rape oil by means of heat, after which 140 gm. of rape oil are added.

INSTABILITY OF DONOVAN'S SOLUTION.

A specimen which had been standing five years on a shop-shelf, fully exposed to the light, deposited a sediment and contained free iodine. It was examined by Mr. E. Goodman, who reported his results. The precipitate was mercuric iodide, and weighed 1.134 gm., equal to a loss of nearly 4.5 per cent. of the salt. The amount of free iodine was nearly 2 per cent. It was observed that the whole of the mercuric iodide was liberated by boiling with hydrochloric acid. The author thought it was impracticable to prepare small quantities of the solution as required, and came to the conclusion that the Pharmacopœia Revision Committee should consider "whether the remaining followers of Dr. Donovan shall have any further recognition."

THE QUALITY OF BELLADONNA ROOT

was the subject of some interesting notes by Mr. W. Simonson, who used Dunstan and Ransom's method of assay. The roots having the smallest diameter (3 to 5 and rarely 7 to 8 mm.) yielded least alkaloids, viz. 0.22 to 0.365 per cent.; those from 10 to 15 mm. yielded 0.364 to 0.617 per cent., and roots double that size from 0.227 to 0.776. Ground and powdered root were equally variable. In respect to size and appearance most of the samples fell below the pharmacopœial description, but those answering it and appearing to have been taken from more mature and fuller-developed plants contained an average of about 0.5 per cent. alkaloids. In view of the variable quality of the supply an authoritative standard of value in alkaloids, for the lower limit at least, is very desirable.

SYRUP OF DEXTRIN OR GLUCOSE.

According to Mr. Fred. A. Rometch, of Chicago, an article called by syrup-mixers "mixing-glucose" is a fair represen-

tative of glucose. It is a thick, syrupy, colourless liquid of about 1.40 specific gravity, containing 40-45 per cent. of grape-sugar and a like quantity of dextrine. Such a composition would well fit it for holding substances in a state of suspension—*e.g.*, oils, powders, resinous substances which separate from tinctures and fluid extracts, when mixed with watery fluids, &c. A considerable quantity of glucose must be used to be efficient, certainly enough to create a mucilaginous menstruum. It offers, however, no advantage over gum arabic, and is not so effective as mucilage or gum tragacanth. Oil emulsions with glucose are more liable to fermentation, the decomposition at the same time affecting a separation of the oil. Emulsions of the balsams keep far better, the balsams acting as anti-ferments. For the preparation of certain pill-masses it is useful; for instance, those containing quinine, bismuth, and the like, and especially vegetable powders. But the masses containing insoluble mineral powders need great attention lest the ready-made pills flatten out in one half-solid lump. Such masses need protracted working in the mortar, and when finished must be rather hard. The absorbent qualities of the vegetable powders ensure a more stable pill-mass. A thick syrupy mass made of glucose and gum arabic answers the purpose admirably. For the preparation of syrup of hypophosphites with iron glucose offers advantages. The syrup keeps well and no iron is deposited. The syrup of hydriodic acid also keeps well without the addition of potassium hypophosphite when glucose is used for its preparation. For use by the pharmacist in making his own proprietary medicines, such as sarsaparilla with iodide of potassium, soothing syrup, &c., glucose can advantageously be used, keeping in mind, however, its readiness to ferment, which necessitates the presence of sufficient alcohol or any other anti-ferment, in order to make the preparation permanent.

THE NATURAL BITTER WATER OF FRIEDERICHSHALL,

said Dr. E. Sander, of St. Louis, in a paper on bitter waters, is obtained from a spring in Germany, which was known and used for manufacturing common salt as early as the twelfth century, and for Epsom and Glauber salts since the last century. It occurs in a bed of marl formed with sandstone, gypsum, and dolomite, belonging to the Keuper system. In former years a bitter water was bottled at the spring, which was produced by mixing the water from the old, weaker spring with that of a new and stronger artesian well, in such proportion as to give it a specific gravity of 1.022, and it was introduced by Dr. Bartenstein in 1842. The analysis of Justus Von Liebig, in 1847, by whom it was strongly recommended, increased its popularity, although it had to share it with the Kissingen bitter water, the production of which in almost identical proportions was also recommended by Liebig.

A PHARMACEUTICAL TRIP TO THE LEVANT.

MR. AUG. BRESTOWSKI, of the editorial staff of the Vienna *Pharmaceutische Post*, who recently left Vienna for the purpose of paying a pharmaceutical visit to the Levant, has written to his journal from Alexandria, giving some interesting impressions of pharmaceutical affairs in the principal places he has thus far visited—Trieste, Brindisi, Alexandria, and Cairo. He commences by lamenting the decay of the Austrian export trade with the Levant, for which he considers his countrymen chiefly to blame, and he quotes one or two instances of the unreliable manner in which Austrian export druggists are in the habit of executing orders, which are certainly not creditable to the firm, concerned, though it seems scarcely fair to blame a whole trade for the alleged misdeeds of one of its members. In Trieste, although the pharmaceutical laws in force there are the same as in other parts of the monarchy, the writer noticed a decided difference in the manner in which pharmacies are conducted, the trade in patent medicines being very much larger there than elsewhere in Austria. Most of the Trieste pharmacies have large and well-appointed business premises, and employ one or two, and frequently more, qualified assistants. A few of them, in the first place the

Farmacia Serravallo, also carry on a wholesale drug business. The latter firm, conducted by Dr. Victor Serravallo, almost controls the whole of the drug trade along the Dalmatian coast, its connections extending far south into Albania, and even into Greece. In Brindisi Mr. Brestowski had occasion to inspect what he describes as a typical chemist's shop of a small Italian town, and from which it would appear as if the material condition of Italian provincial pharmacy had not materially altered since the time when Romeo attempted to bribe the famishing Mantua apothecary. The shop is described as a bare, arched, and somewhat dirty apartment, rather narrow, though deep, the walls of which are provided with dark-coloured wooden boards, some of them so high that they can only be reached by a ladder. All the vessels are out of proportion large, while the dispensing-table, on the contrary, is of quite a diminutive size, scarcely large enough to allow one person to work at it comfortably. The shop is usually empty, the pharmacist or his apprentice squatting outside the front door, where the proprietor gossips and offers his snuffbox to passers by. Still the apothecary, who—thus runs the writer's doubtful compliment—can claim relationship to half the town, has hitherto vegetated contentedly, if modestly. But a brand-new Act for public sanitation has become law in Italy, and will soon sweep away the antiquated chemist and his mouldy shop.

Alexandria is a far more cosmopolitan town than drowsy Brindisi, and its pharmacies are in keeping with the general go-ahead character of the place. The three principal European chemists' shops—there are about fifteen altogether—are owned by Germans. Nearly all the European pharmacies are fitted up with considerable elegance, and are as well stocked with the newest remedies and appliances as any metropolitan establishment. Often the proprietor personally receives his customers, and hands over their prescriptions to the dispenser. Every pharmacy has business connections with a certain number of medical men, who send their patients to it. Near the entrance-door is a box with from fifteen to twenty small drawers, each bearing the name of a medical practitioner, and in which communications addressed to its owner are placed; for nearly all doctors have their papers and letters addressed to a particular pharmacy, which they visit daily, and where they may be seen by their patients, a small consulting-room being found in nearly every chemist's shop.

Frequently the pharmacist, particularly if he is a young beginner, has to pay a commission of 25 to 30 per cent. on the prescriptions to the medical man who agrees to direct his patients to him, a proceeding which, though illegal, is generally winked at. Competition keeps the prices of pharmaceuticals down almost to the Continental level, sales over the counter are small, except of patent medicines, which are in very great request, the French being generally most popular, with Italian and British preparations following next. As a rule, the condition of the foreign pharmacist in Egypt is a fairly satisfactory one, the more so because foreigners are almost, if not quite, exempt from the crushing taxation which bears down the natives. Yet, according to Mr. Brestowski, there is a good deal of grumbling in Alexandria at the British rule, which is said to be ruining the country and to be injurious to business generally. But he probably derived his information in this respect from some of his German friends, whose amiable and chief characteristic it is to be always jeering at the strangers by whose custom and under whose protection they are waxing fat.

Most of the Alexandrian pharmacies—even the larger ones—do not keep any assistants. The staff consists of native apprentices and servants. Where the proprietor does not conduct the business personally he keeps a qualified manager, conversant with foreign languages, and whose salary—without board, and frequently also without lodging—ranges from 200*fr.* to 400*fr.* per month (=100*l.* to 200*l.* per annum), sometimes more. French and Italian are the languages most generally used in the Levant. A knowledge of Turkish and Arabic may, without much trouble, be picked up in any business. Some three or four of the Alexandrian pharmacists are also wholesale druggists, the Farmacia Galetti being the principal one in this respect. Mr. Brestowski also describes a visit which he paid to a native pharmacist—or, rather, quack, for he deserved no better name—Mohammed Eluidini

Effendi. This worthy the traveller found reclining on a diminutive sofa in a small and dirty shop, staring vacantly into space. Medicine vessels bearing written labels denoting their contents in Italian and Arabic adorned the walls, and a little negro boy was pounding away at some mixture in a large cracked China mortar. After some conversation conducted in broken Italian, French, and Arabic, Mohammed Eluidini offered Mr. Brestowski the management of his pharmacy, without salary, but at a commission of 50 per cent. on all prescriptions, an offer which the latter thankfully declined. Cairo was next visited. This city, as the seat of the Government, and having about twice the population of Alexandria, viz. nearly half a million, is even more lively and animated than the latter place. It possesses about thirty European pharmacies, twenty of which would pass muster at home. The three best shops are a German, a French, and an Anglo-Egyptian establishment. The Cairo pharmacies are more like European shops than the Alexandrian, and assistants are better paid, as a rule, in the former than in the latter place. The general fitting of the Cairo pharmacies is plain, but neat. The bottles are mostly of round, uncut glass, generally of much larger size than on the Continent, and provided with simple labels, gold on dark blue.

There are, of course, a large number of native druggists' shops in Cairo, several of the more important among them being found in the *Muski*, one of the busiest thoroughfares of the city. They all have a large stuffed crocodile suspended over the entrance. The shops are well stocked with all manner of drugs, but they do not offer anything of especial interest, except perhaps a root known to the Turks as "*Abdusclam*," and to the Arabs as "*Tuffah-el-dshun*," or spirit-root, and which Mr. Brestowski takes to be a spurious mandrake, probably from *Bryonia alba*. The root, which is found cut into a peculiar shape, is recommended as a strong aphrodisiac. It is imported from Greece and from Asia Minor. The Cairo bazaars, narrow, dark, unpaved passages, mostly roofed with matting, where the merchants sit silently in their niche-like shops awaiting customers, while a roaring crowd of human beings and animals pushes its way along, have been described in countless books of Oriental travels, and Mr. Brestowski can only repeat their already familiar description. The druggists' bazaar is the least noisy of all, and the shop-keepers there squat upon their carpets with even more dignity than their brethren of other trades, conscious of ranking among semi-scientists. Among the principal articles sold by them are so-called "Devil's Claws"—"*Tofr'l-afrid*"—an infallible charm against necromancy and witchcraft; kauri-shells on strings, to be placed round the necks of camels as a safeguard against evil spirits, and an impure earthy soda from the Lybian desert, which in a powder form is given as a remedy against headache and sunstrokes. "*Atachin*," powdered deer-horns, is taken as an antidote to poison, while powdered red coral is administered to women suffering from disorders of menstruation. Alum, zedoary root, black cumin seed, jequirity seeds, and a very common variety of rhubarb are also popular. *Cassia occidentalis* (so-called negro coffee) is roasted and used as a coffee substitute, and small glass vials, containing a few drops of otto of rose, are hawked about for a cosmetic or to perfume confectionery, and the water with which the *Nargilehs*, or Oriental pipes, are filled. But a larger sale than any article is enjoyed by henna, the famous green powder obtained by grinding the small leathery ovate leaves of various *Lythraceæ*. This powder is moistened with water, and with it the finger-nails, and sometimes the fingers and the palm of the hand also, are dyed from bright red to chocolate brown.

The Cairo botanical gardens, situated at some distance from the city, are remarkable for their splendid collection of exotic plants, and also as being the only botanical gardens in Africa which are under scientific management and are used for the purposes of botanical study (?). The gardens were established by Dr. Ernest Sickenberger—an ex-pharmacist, now professor of botany and materia medica at the Cairo école de médecine—and are still under his direction. Besides many other valuable specimens, they contain a large number of extremely rare euphorbia species (brought from Southern Arabia by Dr. Schweinfurth), specimens of the *Carica papaya*, the *Thevetia nerifolia* (from which an arrow-poison is obtained), the *Nymphaea Lotus*, L., the sacred Lotos flower of the ancients, &c.

BRITISH AND FOREIGN CONSULS' REPORTS.

BAHAMA ISLANDS.

Sponge Fishery. The proceeds of the sponge-fishery in the Bahamas in 1888 amounted to 49,113*l.*, which is rather more than an average result. It is generally reported, however, that the sponge-beds are becoming rapidly depleted; and this fact renders it impossible to regard the industry as being in a satisfactory condition.

CHINA.

Increase of Opium Culture. The British Consul at New Chang, in Northern China, reports that the importation of Indian opium into his district is falling off to such an extent that another year or two might see it out of the market altogether, were it not that a few well-to-do natives, mostly Southerners, will always be found who prefer to give a higher price for their old favourite. The cultivation of the native poppy is making enormous strides, and the great danger of famine which the authorities have to face in any exceptional year will be largely increased, owing to so much of the land being devoted to the poppy instead of to food staples. Some idea of the local consumption of opium may be arrived at from the following figures, which are obtained from reliable Chinese sources. There are in the port of Yingtzū alone some 2,000 opium shops. An average sale of opium in a day is 5 oz. This gives 2,244 piculs a year for the public opium shops alone. To this must be added what is smoked in private houses, which is estimated at about 1,500 piculs, and this, it must be remembered, is for Yingtzū only, and those few villages round about which are most easily supplied from here. Twenty years ago 2,685 piculs of Indian drug were imported to supply not Yingtzū, but almost the whole of Manchuria, east of the district supplied through Tientsin, for, though it is true that the native opium was started as long as twenty-four years ago, it was only on a very small scale, and it found very little favour until quite of late years. The population has increased very rapidly, but not in the same proportion as the native opium, and the conclusion is inevitable that opium-smoking has increased enormously.

Ginseng in Corea. The export by sea of red ginseng, which is the most highly prized, is prohibited. The export of it to China by the overland route is permitted, and is carefully watched, the King of Corea himself deriving a considerable proportion of his revenue from the proceeds of its sale, and large quantities certainly leave the country by that route; it is said, too, that nearly as much is smuggled out of the country by Chinese. In the end of July or early part of August, 1888, great damage was done to the ginseng cultivated in the north by the floods caused by the overflowing of the Yalco River.

Chinese and Indian Teas. One of the great advantages which Chinese teas are said to possess over those of India is their greater wholesomeness. On this subject the British Consul at Hankow, in his last report, gives a table of analyses of the two kinds of tea made by Professor Dittmar, F.R.S., from which it appears that the quantity of tannin in Indian tea is 9.68 per cent. and in Chinese 6.01. After twenty minutes' infusion of 100 grains of each there is present in the respective liquors 2.96 grains thein and 6.53 grains tannin in the Indian and 3.37 grains thein and 3.86 grains tannin in the Chinese tea. "The teas in question," concludes Mr. Allen, "were both high-class teas, and the analyses given above certainly tend to show that there is an excess of tannin, with all its astringent and deleterious qualities, in the Indian tea."

TRIPOLI.

Drugs and Perfumery. Drugs and perfumes are by far the most important articles of import into Bengazi, a port on the coast of Tripoli which carries on its principal foreign traffic *via* Malta. Last year 7,500 cwt. of these articles, valued at 37,500*l.*, were imported into Bengazi, against only 720 cwt., worth 3,600*l.*, the year before. Of oil and soap the imports were worth 10,650*l.*, against 10,400*l.* the year before. The harvest last year appears to have been very good, and, as the consul says, an abundant harvest means large purchases of drugs, perfumes, and certain luxuries.

A Manchester firm has recently started a branch agency at Bengazi.

Sponges. There is a flourishing sponge-fishing trade in the Gulf of Sidra (Syrtis Major), the boats buying their licences at Bengazi. The export of sponges in 1888 was 860 cwt. (worth 40,000*l.*), against 650 cwt. (worth 30,000*l.*) the year before.

TURKEY IN EUROPE.

Gum Tragacanth. Constantinople was formerly the great market for gum tragacanth, but it is now shipped extensively from Bagdad, Beyrout, and Mersine, to which ports the entire produce of Syria and Arabia is at present despatched. In 1887 the business done in this gum presented no noticeable feature, but in 1888 there was a brisk demand for the best qualities from London, and a consequent increase in the supplies, though not in prices. The exports were in 1887-88 1,200 cases, and in 1888-89 2,000 cases.

Opium at Constantinople. The exports of opium from Constantinople for the years named respectively were as mentioned below, the cases containing 155 lbs. each:—

Year	Arrivals	Exports
	Cases	Cases
1886-87	768	906
188-88	2,790	2,243

Consignments of this article to America have considerably increased during the past year.

VICTORIA.

Trade in the Colony. Among the exports of Victoria-made articles from the colony of Victoria during the quinquennium 1883-87 are named:—

	1883	1884	1885	1886	1887
	£	£	£	£	£
Drugs and chemicals ..	15,400	12,398	17,144	13,164	10,647
Soap	12,709	15,559	18,189	13,354	10,485
Oilman's stores ..	13,133	15,421	14,400	11,898	13,622

In 1887, according to value, over two-fifths of the Victorian imports were from, and nearly half of the exports were to, the United Kingdom. About 38 per cent. of the former, and 40 per cent. of the latter, were conveyed between Victoria and the neighbouring colonies, chiefly New South Wales. In regard to foreign countries, the imports therefrom amounted to 12½ per cent. of the total imports, and the exports thereto to over 7 per cent. of the total exports.

The imports of foreign goods into the colony show considerable fluctuations, as will be seen from the following quinquennial table:—

Imports	1877	1882	1887
Drugs and chemicals .. value £	54,191	84,365	82,155
Opium	79,149	77,089	37,280
Paints and colours ..	£0,486	79,635	71,436
Tea	599,725	745,226	694,696
Oils	241,001	183,558	198,074

The import duties received in 1886 and 1887 amounted to nearly 12 per cent. of the total value of imports. Some idea of the extension of Victorian commerce may be formed from the circumstance that, although the population of the colony increased by less than 60 per cent. during the twenty years ended with 1887, the tonnage of vessels entered and cleared in the last as compared with the first year of that period increased nearly threefold. The number of miles of railway open in the colony on June 30, 1887, was 1,880, consisting of 1,643½ miles of single and 236½ miles of double line.

WHAT IS A POISON?—The grand jury of the State of Pennsylvania has answered the question, having decided that chloroform is not legally a poison, as it does not cause death in doses of 60 grains or less.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., August 1.

BUSINESS has been fairly steady this week, allowing for the commencement of the holiday period and the approach of the Bank Holiday. In fine chemicals quinine is decidedly better, and all mercurials have advanced 1*d.* per lb. In heavy chemicals and metals we have to record an advance in quicksilver, soda crystals, bleaching powder, and sulphate of ammonia, while sulphate of copper and carbolic acid tend rather the other way. In drugs ergot of rye and tragacanth are dearer, while more money is required for star-anise oil, HGH peppermint, and Italian essential oils. Opium and ipecacuanha remain firm. There have been declines in cascara sagrada, chamomiles, insect-flowers, and otto of rose. A good many changes have occurred in the drysaltery and allied markets, the most notable being the rise in block gambier, Turkey galls, myrabolanæ, turmeric, shellac, palm, rape, olive, and cotton oils, turpentine, white pepper, and cassia. China galls remain very firm, but all East Indian gum arabics, as well as white Mogador, are lower in price. Linseed oil and pimento are also easier.

THE "SHAH" AT THE TEA SALES.—An outsider visiting last Wednesday the Indian tea sale (where thousands of pounds' worth of tea are knocked down in almost as many minutes) would have been edified to see the auction interrupted for some fifteen minutes while the whole room howled and shouted at a man got up in Eastern costume and supposed to resemble the Shah. The intruder smoked a pipe in the sale room, and favoured the company with a tune on a guitar. The China sales are sometimes not unlike the proverbial bear-garden, but they are orderly compared with the Indian and Ceylon room.

CHEMICALS IN THE NORTH OF ENGLAND remain in a very firm position generally, but our correspondent writes that prices of almost all articles have not substantially changed since last week.

THE French Colonial Department are extremely anxious to open up an overland trade route between their possessions in Tonquin and Annam and Southern China, in the hope of thereby diverting the enormous volume of trade which now finds an outlet by way of the port of Canton to their own trading ports. Recent investigations have shown that besides the Red River, which has hitherto been supposed to be the only navigable route leading from China to French India, there is another waterway, perfectly navigable, which runs from South-western China into French territory. It would be a comparatively easy undertaking to establish a safe trade route between this waterway and the French-Indian ports, and it is thought that by so doing the entire caravan trade from Yunnan, Szechuen, and other parts of South-western China might be diverted into French channels. At present goods from these provinces take from sixty to eighty days to reach Canton; by the projected new route they could reach the French-Indian ports in about one-sixth of that time.

DESTRUCTION OF A GLASGOW CHEMICAL WORKS.—On Thursday a destructive fire occurred at Messrs. Alexander Cross & Sons' chemical works, Port Dundas, Glasgow. The fire appears to have originated in the platinum-still section, and spread thence eastwards. Thirteen chambers containing sulphuric acid were destroyed, and the acid from them

poured down in streams to the canal. The damage is estimated at over 20,000*l.*

THE TINCTURE DRAWBACK.—We understand that on behalf of several firms interested in the manufacture of medicinal preparations under the new drawback regulations, representations have been made to the Board of Inland Revenue with a view to obtain the alteration of one of the provisions of the recent order. That order provides that all packages of preparations exported must bear a distinguishing mark and the name of the manufacturer. Now there are several drug firms who, for one reason or another, prefer to employ a reliable firm in London (as they formerly had to do in Hamburg) to make the tinctures for them and ship them on their behalf. But under the present order it is imperative for the full address of the actual manufacturer, as distinct from the shipper, to be marked on the packages, and to this advertisement of the makers to their customers the shippers naturally object. They have now, in conjunction with the actual makers, petitioned the authorities to allow a distinguishing mark only to appear upon the export packages, and we understand that it has been intimated that the reply will be a favourable one.

ACID (CARBOLIC).—The demand for crystals is not very lively, and crude carbolic seems to be offering rather more plentifully. Crystals are quoted at 11½*d.* to 1*s.* 2¾*d.* per lb., according to quality.

ACID (CITRIC).—Prices have not improved, and 1*s.* 4*d.* per lb. is generally quoted for spot stuff. It is rumoured that a rather large parcel which has belonged to a firm now in difficulties is likely to be thrown upon the market, though we doubt whether that report will prove correct, while at any rate the quantity of the parcel to be eventually placed upon the market in this manner is not likely to be very considerable.

ACID (OXALIC) dull at 4½*d.* per lb.

ACID (TARTARIC) very quiet at 1*s.* 2¾*d.* to 1*s.* 3½*d.* per lb., according to brand; perhaps concessions might be made for a quantity.

AMMONIA SALTS.—Carbonate neglected at 3¾*d.* to 4*d.* per lb. Sal ammoniac remains unchanged at 36*s.* for first and 34*s.* per cwt. for second quality crystals. Sulphate a little dearer, though closing quiet and inactive. Beckton terms, 12*l.* 2*s.* 6*d.*; 24 per cent. grey, 11*l.* 18*s.* 9*d.*; Hull and Leith, 11*l.* 17*s.* 6*d.*

ANISE.—Firm with a tendency to advance. New Italian anise, which is just coming forward, is held at 36*s.* to 37*s.* per cwt. China Star anise firmly held; cablegrams from Hong Kong quote 83*s.* per cwt. for one-picul cases.

ANTIMONY.—In Crude Japanese antimony business has been done at 34*l.* to 35*l.* per ton, London terms, for forward delivery now afloat. Regulus quoted at 64*l.*, and firm.

ARSENIC.—Scarce and firm at 13*s.* 3*d.* per cwt. for best white powder, landed terms.

BALSAM COPAIBA.—There is very little doing in this article. Some further arrivals have taken place, and the quotations remain nominally 2*s.* 5*d.* to 2*s.* 6*d.* per lb. for best bright Maranham.

BENZOL has advanced, and it is doubtful whether 2*s.* 10*d.* would be accepted for 90 per cent., or 2*s.* 1*d.* for 50 per cent. Higher prices are also asked for forward delivery, and as the demand for consumption remains excellent it is likely that the rise has not yet reached its limit.

BLEACHING-POWDER.—Still tending higher and very firmly held at 8*l.* ex warehouse here, and 7*l.* 5*s.* to 7*l.* 10*s.* on the Tyne.

BORAX.—Very dull and drooping at 28*s.* per cwt. from second hands.

CAMPHOR (CRUDE).—Reports from the producing markets speak of great scarcity, and quote higher rates, cablegrams from Hong Kong asking 107*s.* per cwt., delivered terms, for Japan. The London market, however, is very quiet, 102*s.* 6*d.* per cwt. being the nominal spot quotation, while

there have been offers of August-September at 95s. c.i.f., reweights. A parcel is now being landed. The demand for camphor on the Continent this summer is said to have been far larger than ever known before, not only for the usual purposes, but especially for the manufacture of the new smokeless gunpowder, which is now being made on a large scale for use in the German and other armies. We suppose that the use of camphor as an ingredient in this powder is based upon the fact that the 12 to 13 per cent. (by weight) of oxygen which is contained in camphor would combine with a considerable proportion of the carbon in it to form carbonic oxide, thus largely diminishing the excess of carbon, which in ordinary gunpowder forms smoke.

CAMPHOR (REFINED).—Trade is not very brisk at present. English refined, in bells, 1s. 3d. per lb.; foreign perhaps just a shade cheaper.

CANTHARIDES.—*Russian* cantharides are now quoted at from 3s. 8d. to 4s. per lb., according to quality. Sales of *Chinese* flies were made a few days ago at 10d. per lb.

CARAWAY SEED.—Prices have given way further on account of the still excessive supply, and old seed is now very difficult of sale.

CARDAMOMS.—The shipments from Ceylon, which a few weeks ago threatened to fall very considerably below those of last season, have lately been increasing, and, according to the latest mail advices, were only slightly below last year's, the figures for the periods between October 1 and July 4 being:

	1885-6	1886-7	1887-8	1888-9
lbs. ..	204,914	280,734	271,358	237,674

CASCARA SAGRADA.—The price of genuine bark has now been reduced to 8½d. per lb.

CHAMOMILES.—Further news from Belgium confirms the report of a large and good crop. For good new flowers 60s. per cwt. is now asked, but the druggists only buy from hand to mouth.

CINCHONA.—Our imports since the last report have been 645 packages. The periodical sales on Tuesday embraced of:

	Packages	Packages
Ceylon bark	1,216	of which 1,026 were sold
East Indian bark ..	664	" 550 "
South American bark	867	" 603 "
Java bark	78	" 78 "
Total	2,825	" 2,257 "

A very firm tone prevailed throughout the auctions, and occasionally the bidding became quite spirited, though holders frequently declined to meet buyers, and several parcels were bought in or withdrawn. A few parcels excepted, which went off at some advance, no actual improvement in price can be reported, but quotations were certainly very steady. The average unit is thought to have been fully 1½d. per lb.

The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works ..	113,357
" the American, French, &c., works ..	112,794
" the Brunswick factory ..	60,975
" the Frankfort o/M. and Stuttgart works ..	42,256
" the Auerbach factory ..	33,222
Messrs. Howards & Sons ..	25,262
Mr. Thomas Whiffen ..	15,819
Sundry druggists, &c. ..	27,066
Total sold ..	430,751
Bought in or withdrawn ..	146,411
Total quantity catalogued ..	577,162

It should be well understood that the mere weight of bark purchased affords no guide whatever to the quinine yield represented by it, firms who buy a small quantity of bark by weight frequently taking the richest lots, and *vice versa*. An analysis of the catalogues gives the following prices for sound bark:—

CEYLON BARK.—*Original*: Yellow varieties: chips, weak and thin, ¾d.; fair to fine stem chips, 3½d. to 6½d.; root, 1¼d. to 2d. per lb. Grey varieties: chips, small but bright,

rather weak, 1½d. to 2½d.; fairly rich, 3d. to 3½d.; a few good lots, 5d.; fair quilly, 4d.; fine rich spoke shavings, 5½d. per lb.; root, of which a rather large quantity was offered, 2½d. to 6d. per lb. Red varieties: small to fair chips, 1½d. to 2d.; good bold chips, 3d.; fair to good shavings, 2d. to 3d.; ordinary chips and shavings, 1½d. to 2d.; good bright shavings, 5d.; root, dull and dusty to fine bright, 1½d. to 5½d. per lb. *Renewed*: yellow, good stem chips, 5d.; grey twigs, 1d. to 1½d.; ordinary weak chips, 2½d.; fair to good, rich quilly mixed chips, 3½d. to 6d.; small to good shavings, 2½d. to 4d.; rich to fine bright, 6d. to 7½d. per lb. Red chips, rather weak and unattractive, 2½d. to 3d.; shavings, 3d. to 5½d. per lb.

EAST INDIAN BARK.—*Original*: yellow fair quilly chips, 2½d. to 3d. Grey varieties: small chips mixed with quill, 2d. to 3d.; strong branchy ditto, 4d. to 5½d.; fine bold mossy broken quill, 7d. to 7½d.; dull thin spoke shavings, 1½d. to 1¾d.; twigs, 1½d. per lb. Red varieties: twigs, 1½d.; chips, rather dusty and mixed with twigs, 1½d. to 1¾d. (a large proportion of the red bark consisted of this class); good, 2d. to 3d.; spoke shavings, good bright, 2½d. to 3d.; fair but rather irregular brown druggists' quill, 4d. to 5½d.; root, dull and dusty, 2d. per lb. *Renewed*: fair to good grey shavings, 4d. to 5½d.; fine bright chips, 7d.; fair ditto, 4½d.; red chips, dull, rather weak to good bright, 2½d. to 4½d. per lb.

JAVA BARK.—Yellow sweepings, 1d.; good strong but dusty and dark root, 6½d.; small dusty branch chips, 3d. to 3½d.; fine bold quilly chips, 6½d. to 7d.; red chips, fairly good bright, 2½d. per lb.

SOUTH AMERICAN BARK.—Of 727 packages cultivated Bolivian *Calisaya* 603 found buyers at steady rates, the average quality not being a very attractive one. Good stout partly silvery quill brought 6d. to 8d. per lb.; damages from 3½d. to 7d. per lb.; sound but irregular and rather dark inner coat, 4½d. to 6½d. per lb. The entire quantity sold was 55,981 lbs. Of *Cuprea* bark 140 packages of new import were bought in, 2½d. per lb. being asked. The exports of cinchona from Ceylon during the periods of October 1 to July 4 have been as follows:—

	1885-6	1886-7	1887-8	1888-9
lbs. ..	12,860,526	11,703,924	9,183,039	8,445,063

COPPER SULPHATE rather quieter at 27l. for August, and 23l. to 24l. for September delivery.

COTO BARK.—At the cinchona auctions on Tuesday 4 bales spurious coto, partly damaged, together about 730 lbs., sold at 4½d. per lb.

CREAM OF TARTAR quiet, with sellers of best first white French crystals at 91s. per cwt.

CUMIN SEED.—There is plenty of Malta seed to be had at very low prices.

CUTCH.—A steady business has been done at 28s. 6d. for *Double Eagle*, and 26s. for *Cock*. At the public auctions on Tuesday 1,256 cases very common cutch sold "without reserve, all faults," at from 4s. to 7s. per cwt.

ERGOT OF RYE.—Business has been rather quiet this week, and though there have been plenty of inquiries, we do not think that any transactions of real importance have been concluded. *Russian* ergot, of which the crop is reported likely to be a very short one, was quoted at 1s. 4d. per lb. c.i.f. early in the week, but there is no doubt that it might now be had at 1d. less. *Spanish*, 1s. 7d. to 1s. 8d. per lb.

FENUGREEK SEED.—The new Morocco crop is now being offered plentifully, the supply rather exceeding the present demand, and 7s. 6d. per cwt. being the nearest price. The steamer *Mogadore* brought 1,519 bags from Casablanca this week.

GALLS (CHINA).—On the spot we do not hear of much business, though holders are exceedingly firm at 67s. to 67½d. per cwt., and with small sales at the former figure for barely fair quality. For arrival very little is being offered. Cablegrams received yesterday from Hong Kong quote 67s. 6d. per cwt. for Canton galls.

GALLS (TURKEY).—Reports from the Levant are decidedly firmer, and for *Blue* galls 56s. per cwt. is now asked, while for *Green* galls 47s. 6d. per cwt. is reported to have been refused, 50s. being required. There has been a rather heavy

inquiry for white galls, which at the present prices seem in request for acid-making, and it is doubtful whether any more could be had at 42s. 6d. per cwt.

GAMBIER.—The advance has been still more pronounced this week than of late, and we have now to report business in *Block* on the spot at 31s., June-July, 30s. 4½d.; July-August, and August-September at 30s., and September-October at 29s. 3d. per cwt. The imports last month have been 211 tons, the deliveries 523 tons, and the stock has been reduced to 289 tons.

GLYCERINE steady at 64l. to 65l. for double distilled s.g. 1.260.

GUM ARABIC.—At to-day's auctions a very heavy supply was offered, the total figuring up to over 3,000 packages, nearly all East Indian gums, and mostly of very inferior character. The tone of the auctions was, if possible, even duller than that which characterised the previous sales, and with few exceptions only the most ordinary lots were sold at a general decline, white Mogadore gums being nearly 25 per cent. lower in price. The following are some of the figures realised:—*White Mogadore*, fair ambery, 80s. to 95s.; *Mogadore Amrad*, 40s. to 41s.; and *Brown Barbary* gum at 54s. per cwt. Common to blocky brown *Cape* gum sold at 25s. to 40s. per cwt. Of *East Indian* gums, very good clean to fine pale Ghatti sold at 50s. to 97s. 6d.; low and dark to good ditto at 21s. to 41s. 6d. per cwt.; common to fine pale Kurrachee Amrad, 44s. to 81s. per cwt. In the private market there is very little business. As regards *Senegal* gum, the crop of Galam, which will come to market about September, is said to have been a large one; at present prices are nominal, Galam at 5l., and Bas du Fleuve at 5l. 5s. per cwt.

GUM BENJAMIN.—The arrivals since our last report have consisted of 60 cases.

GUM OLIBANUM.—At to day's auctions nearly 600 cases were offered, but only a small part found purchasers, the tone being a very dull one, especially for the better grades. Fine pale drop brought 56s.; medium to fair, 32s. to 35s.; and pickings from 13s. to 18s. per cwt.

GUM TRAGACANTH.—Telegrams have been received from Smyrna announcing an excited market there, and our holders have nearly all withdrawn their supplies from the market. Sales of good seconds *Syrian* have been made at 10l. per cwt., but it is doubtful if anything could still be had at that price.

HONEY.—The outlook for the crop in the British islands is a very good one.

INDIGO.—The market for East Indian indigo remains very quiet, the only quality in request being good coloury *Kurpah*, which is rather scarce, as the new arrivals seem to be below the average in quality. *Oudes* have been sold in a small way at the last auction rates. The total stock of East Indian indigo on July 31 was 14,633 chests, against 15,547 chests and 14,228 chests respectively at the corresponding periods of 1888 and 1887.

INSECT FLOWERS.—The Trieste market quotes rather lower prices.

IPECACUANHA.—There are some inquiries to-day, and buyers at 6s. 9d. to 6s. 10d. per lb. for usual fair quality.

ISINGLASS.—The periodical auctions were held this week, and resulted in an advance of 3d. to 4d. per lb. on good *Penang* leaf, which sold at 3s. 2d. to 3s. 6d.; tongue, 2s. 1d. to 2s. 8d. *Bombay* pipe lower; ordinary gelatinous to fair, 9½d. to 1s. 6d. *Brazil* steady; brown to pale tongue, 2s. 1d. to 3s. 3d.; common to fine lump, 1s. 8d. to 2s. 8d. *Saigon*, ordinary to good leaf, 4s. 10d. to 5s. 4d. per lb.

LINSEED is still advancing in price, the demand for East Indian seed from the Continent being especially heavy.

MERCURIALS.—In sympathy with the advanced price for mercury, the English manufacturers have again advanced their quotations 1d. per lb., the prices being now calculated on the basis of 3s. 7d. per lb. for *Calomel*. *Corrosive sublimate*, 3s. 11d.; *Red precipitate*, 3s. 10d.; *White ditto*, 3s. 9d.; *English Vermilion*, 3s. 2d. per lb.

MYRABOLANES have been in speculative request at higher

rates. Fair upper Godavery, 8s.; good Godavery, 9s.; fair to fine Jubbulpore, 8s. to 8s. 9d. per cwt.

OIL (CASTOR).—*Italian* oil is still tending dearer, and we may see higher prices as the season advances. *East Indian* oil firmly held at the last quotations. Small sales of good Calcutta seconds at 3½d. per lb. in Liverpool. In the early part of July castor seed was very scarce in India, and business was restricted for want of material. The dearth in good seed is especially pronounced, though of common seed there is also great scarcity.

OILS (ESSENTIAL).—*Star-anise* oil has become firmer, and we understand that offers of 5s. 10d. per lb. had been refused to-day. There are several buyers at that price, but holders decline to part below 5s. 11d. per lb. China cablegrams quote 5s. 8d. "c.i.f." terms, steamer shipment. *Cassia* oil dull, with sellers at 3s. 5d. per lb. American *Peppermint* oil has advanced to 11s. 6d. per lb. for H.G.H., at which price sales have been made. Italian oils are also dearer and in very good demand, for *Lemon* an advance of 2d. to 3d. per lb., and for *Bergamot* of 6d. to 8d. per lb. must be paid. The hot weather is greatly stimulating the consumption, and the stock in London is becoming perceptibly smaller. The principal Constantinople dealer in *Oslo of rose* has just fixed his price for the new season, the quotation being 18s., or 1s. 6d. below that of last year's. Some of the distillers have not altered their quotations yet, but it is likely that most of these will be compelled to follow.

OILS (VARIOUS).—*Cocoonut* quiet and dull, Ceylon at 23l. 10s. to 24l., Cochin at 26l. 10s. to 27l. 10s., and Mauritius at 24l. 15s., nearest price. *Cotton-seed oil* again higher, at 24l. 10s. for crude, and 26l. 15s. to 27l. 10s. for refined oil. *Linseed* has given way a little, and closes quietly at 20l. 12s. 6d. to 20l. 15s. *Olive* oil has been in good request, and is rather dearer; Spanish and Messina at 34l. 10s. to 35l.; Mogadore, 32l. 10s. to 33l. *Palm* oil has been in demand, and is quoted higher at 25l. to 25l. 10s. for fine Lagos. *Petroleum*: A large business has been done at firm rates, mostly for forward delivery; American closes at 5½d. to 6½d., Russian at 5½d. *Rape oil* dearer, at 30l. for brown, and 31l. 10s. for refined on the spot. *Turpentine*: American spirits advanced to 32s. 6d. spot.

OPIMUM.—Our market remains quiet but firm, although business is of a very restricted character. There are sellers of fine druggists' sorts at 11s. per lb., but no buyers at that figure. For seconds from 9s. 6d. to 10s. per lb. is the quotation, and a fair business is reported at the lower figure. Some inferior *Persian* has sold at 12s. per lb., while 13s. per lb. would be paid for fine. Telegrams from Salonica announce an advance in that market of 6d. per lb. yesterday. The Constantinople and Smyrna markets are described as firm but quiet.

POTASH SALTS.—Montreal *Potashes* are rather firmer, though the price still remains at 21s. per cwt. *Bichromate* quiet at 4d. per lb. *Chlorate* well maintained at 4½d. to 4¾d. per lb. *Prussiate* firm, yellow at 6½d. to 7d., red 1s. 7d. per lb.

QUASSIA.—Arrivals are still coming in from the West Indies direct and *via* the States.

QUICKSILVER.—On Tuesday the principal importers, after selling a rather large quantity at 9l. 10s., advanced their price to 9l. 15s., and second-hand stuff rose to 9l. 10s., but to-day the second-hand holders are easier, and would take 9l. 8s. per bottle.

QUININE.—The market has been firm but quiet this week, and only a few transactions are reported. At the close we hear that there are buyers of German bulk at 1s. per oz. on the spot, while for forward delivery 1s. 1d. per oz. is the nearest price. The German agents who have been selling most lately do not quote to-day.

RHUBARB.—We notice an arrival of 80 cases, per *Stentor*, from Shanghai, since our last report.

ROSE-FLOWERS.—In connection with the report from our Amsterdam correspondent, it may be stated that the German crop of rose-leaves this year is not thought to exceed 2,400 lbs. In France the crop is also small.

SCAMMONY very scarce and dear, especially for the finest qualities, for which, if available, 30s. per lb. could be obtained. *Skilleep* sold at 8s. 6d. per lb.

SENEGA.—The new crop is quoted at higher rates from America, but on our market no change is made, the quotation remaining at 1s. 10d. per lb. for good quality.

SHELLAC.—At the public auctions on Tuesday 598 cases orange lac were nominally offered, but holders displayed considerable firmness, whilst on the other hand buyers did not seem over anxious to secure any lots. Under these circumstances only about 85 cases offered "without reserve" sold at full rates; good bright, but reddish ASSL, unworked, at 93s.; ordinary livery to fair red second orange, at 63s. to 66s. per cwt. In the "ring" the article has continued rather neglected at nominal prices until to-day, when a fair amount of business was transacted at the following rates:—

	Aug.	Sept.	Oct.	Nov.	Dec.
Orange TN, sellers ..	100	200	69/6	100	69/6
" buyers ..	67/0	68/6	68/6	68/6	68/0
Garnet AC, sellers ..	55/0	55/6	56/0	—	—
" buyers ..	54/0	54/6	54/6	—	—

which is a decided advance. The London statistics for the month of July were rather favourable, the imports having been 1,591, and the deliveries 3,864 cases, while the stock at the end of the month was 69,105 chests. The shipments from Calcutta, though not yet definitely known, are reported light.

SODA SALTS.—Ash in fair demand at 1½d. landed; Tyne, 1d. less, 6 per cent. per degree. Bicarbonate remains firm at 5l. 2s. 6d. ex warehouse. Caustic is quiet, and the output is being gradually much restricted. At present 6l. 15s. to 7l. is quoted for white 60 per cent., and 6l. 15s. for cream. For 70 per cent. the inquiry is very slight. Crystals dearer at 50s. 6d. ex ship London, and 44s. to 45s. on the Tyne. The demand is keeping up well, and the stocks are certainly not increasing. Nitrate dull at 8s. 9d. to 9s. per cwt.

SPICES.—Arronroot dull and without sales. Cassia lignea: further sales of 2,760 boxes imported in 1880 were made at the weekly auctions. This parcel brought rather better prices, from 20s. 6d. to 22s., the latter being the closing quotation. China cablegrams quote 21s. "c.i.f." terms, sailer shipment. Cloves steady for Zanzibars, common dark to fine bright, 6d. to 7½d. per lb. Ginger, Cochin dull and little sold. Jamaica sold pretty well, good common to fine bold picked, 64s. to 115s. per cwt. Mace and Nutmegs quiet. Black pepper has been firm, grey to fair Singapore, 6½d. to 6¾d. White pepper dearer, fair to very fine Penang, 7½d. to 9½d.; Singapore, 10½d. per lb. Pimento lower at 3d. per lb. for fairly good.

TEA.—The China market shows easier rates for almost all grades except Kien-Kiangs and pure Ningchows. The former are much wanted, and realise 10½d. to 11d. for what would ordinarily be considered 9d. to 9½d. tea, while the latter are promptly snapped up by exporters as soon as the samples are shown. Common new Moning has sold as low as 4¾d., and is distinctly better than old tea at the same money. Oonfaas are showing good value, and some useful teas have passed the hammer from 8d. to 9½d. per lb., the latter being as good as some of the teas which fetched 1s. per lb. last season at this time. Scented capers remain steady in spite of rather large supplies at auction, prices being very reasonable, and the teas going into consumption. Old Kaisows are getting into smaller compass, and, thanks to the late date of new season's Red Leaf tea, dealers are struggling out of their stocks at better prices than at one time appeared likely. The arrivals of Moning and scented tea for the week are heavy, but there is not as yet any pressure on the part of importers to sell. All better Assams keep very dear, and any old teas with quality are worth good market profits on the quotations of a month ago. There are, however, very serviceable Souchongs and Pekoe Souchongs, 1889-90 season, selling from 6d. to 7d., and these are about the best value to be had in Indian teas. Ceylons fully maintain the late advance, Pekoes and fine Pekoe Souchongs, from 10d. upwards, being keenly competed for.

TURMERIC.—In consequence of the somewhat alarmist reports from India a rather better demand has sprung up for some varieties, and sales have been made at 10s. per cwt. for fair Bengal ginger.

WAX (JAPAN).—Retail sales at 45s. per cwt. for fair quality.

THE GERMAN MARKETS.

HAMBURG, July 30.

BUSINESS appears to have been slack in all parts of the chemical and drug branches, and there is very little of any interest to be mentioned from our market.

The prices in this column are given in marks (11¾d.) per 100 kilos., or per kilo. (1 kilo. = 2 lbs. 3½ oz., 50¾ kilos. = 1 cwt.).

ALOES.—Curaçao.—There is not so much coming in now, and prices, though very low, are well maintained, common qualities realising at 38m. to 40m.

ANTIMONY again dearer, crude Japan being now worth 72m., while 65m. is reported to have been paid for July-August shipment.

BALSAMS.—In Copaiba little is doing at present, but owners are firm and do not appear eager to realise; 4.75m. to 4.80m. for Maracaibo and 4.50m. for Bahia may now be quoted. Of the veritable Maturin variety a small lot came in and found buyers at full prices. Peruvian remains weak; the second hand asks 7½m. for a genuine balsam, a very low price. Tolu without business.

BARKS.—Of Angostura a parcel of 45 bales of a woody quality has been offering at 35m. Cascara sagrada.—For the new bark 2m. to 2.25m. is asked, but for delivery August-September shipment 1m. has been accepted. Cinchona.—Porto Cabello weaker. Of the last arrivals of 431 bales, the greater part has been sold cheaply; prime qualities can be had at 120m. to 125m. Eighty packages of the genuine yellow flat Calisaya, newly imported, realised 4m., a full price. Coto bark.—Pará is offered in rather heavy supply, and the owners have moderated their prices to 1.50m. Condurango, firmly held at 2.75m.

ERGOT OF RYE.—There has been a sharp upward movement in this article, and a good many lots of sound ergot have been taken off the market.

GUM (ASPHALT).—450 bags Cuba arrived this week, but the prices demanded appear to be too high to lead to business. Of the Syrian variety 250 cases have come in. The quotation is 60m.

JALAP.—The last arrivals of about 150 bales have found no buyers, owners holding at exclusively high rates, and buyers being cautious in operating. Prime old heavy root cannot be bought under 115m. to 120m.

MATICO.—In face of the large assortment offered (about 190 bales) not much interest was manifested in the article; 75m. to 120m., according to quality, may be quoted now.

WAX (JAPAN).—It is said that there is a slightly firmer feeling in the market, but prices are still unchanged; 86m. to 87m. for fine whitish squares.

THE DUTCH MARKET.

AMSTERDAM, July 31.

COCOA BUTTER.—Next sales on August 6 will consist of about 54 tons Van Houten's, of which 24 tons A, 15 tons B, and 15 tons C.

CUBEBS are remaining firm, with limited business. A few parcels of genuine berries are expected by steamers from Java in August, and these, with the small stock here and in London, must be sufficient for the next eight or nine months. A decline in prices is, therefore, not probable.

RED ROSE-LEAVES.—The Dutch crop is finished. The quality is of the usual good character, but the quantity is the smallest that has been gathered since 1881. The same kind of roses grow only in the neighbourhood of Hamburg (Vierländer), and there also the crop is reported to be exceptionally small, whilst France, which produces also a kind of roses for medical use, has also remained behind former years. The prices paid are consequently high, and will probably go much higher still when America begins to buy. Prices paid for 1888 rose-leaves vary between 3.20f.

to 3.40f. per $\frac{1}{2}$ kilo.; for new rose-leaves, from 3.20f. to 3.60f.; at which prices nothing more is obtainable, some growers asking up to 4.25f. per $\frac{1}{2}$ kilo. (= 6s. 4d. per lb.). In 1881, when the crop is said to have been larger than this year, up to 9s. per lb. was paid for 1880 rose-leaves, and more for 1881 crop. There are sanguine owners who expect still higher rates to prevail in the last months of this year. In Hamburg 16m. to 17m. per kilo. has been paid already a fortnight ago for new Vierländer rose-leaves.

THE AMERICAN MARKETS.

(Telegram from our Correspondent.)

NEW YORK, August 1.

OUR drug market remains extremely quiet, and almost every article is in a neglected condition, with little disposition on the part of operators to enter into any speculations. *Quinine*, notwithstanding slightly better reports from London, remains neglected, and in *Oil of Peppermint* the "bear" party maintain the upper hand. *Casarea Sagrada* also is still declining in value daily, the new crop coming in heavily. *Senega* and *Serpentaria* roots form an exception to the general state of the market, prices for both articles being quoted higher, with good demand.

NUTMEGS AND MACE.

MESSRS. SCHROETER & CO., of Amsterdam, send us a further report on the subject of the alleged existence in Holland of a "ring" to control the spice-markets, with a request to publish it in reply to an article which appeared in our issue of July 20. We have no space for the whole circular, but the following is an abstract:—

The Rotterdam report, published in THE CHEMIST AND DRUGGIST of July 20, takes exception to the statement that stocks in Holland since the beginning of this year have been steadily increasing. There cannot be any question about this fact itself, as the official statistics showed a stock of 150,500 kilos. on June 30, against 112,300 kilos. on January 31 this year.

Instead of explaining this increase by the deliveries, which during the first six months of 1889 were only 104,100 kilos., against 135,300 kilos. in 1888 and 149,100 kilos. in 1887, they refer to the delay in the arrivals, caused by the running of a new line of steamers. No one questions this delay, but we dispute that it has had such an enormous influence on statistics this year.

The report further maintains that it was folly to assert that stocks in Holland would be sufficient for the world's consumption for a whole year. Nobody ever set up such an assertion. What we said was that the Dutch stocks would be sufficient for the world's consumption for a whole year, thereby meaning not only our official stocks in Holland, but the private stocks as well, especially about 1,200 cases nutmegs now in private warehouses, and the 1,400 to 1,500 cases lying for Dutch account in New York, about 800 cases likewise for Dutch account in London, as well as not inconsiderable quantities of nutmegs now afloat, or meanwhile arrived from the British and Dutch Indies for Holland. If consumers continue, as they have done since the commencement of the rise, to buy for pressing wants only, then these stocks will last for even more than a year.

The Rotterdam firm denies the existence of a "ring," and tells us that the greater part of the stocks are owned by Indian houses, who are determined to sell at a large profit only; at the same time it says that it would be interesting to learn which field a syndicate could find for its operations in view of the reduced stocks. Are we to believe that the existence of the stocks mentioned above is really not known to that firm? The said Rotterdam firm (though not at all interested) thinks the deficiency in the crop not yet sufficiently discounted, because in 1887 200c. per $\frac{1}{2}$ kilo. was paid temporarily for 80 to 85's nuts, whilst the present price is only 184c. Our neighbours forget, however, entirely, that

for the principal sorts of 110 to 120's per $\frac{1}{2}$ kilo. the highest price in 1887 was only 163c., against 173c. to-day, and, further, that the average price for these sorts during the last twelve years has been 145c. only. If, therefore, we admit that the larger sizes of nutmegs are at the present moment comparatively cheap, we cannot infer from it that values of the article generally are low.

The Rotterdam statements with regard to shipments from Penang and Padang do not at all tally with the official export-lists of these places, as published in our last annual report. Exports from Penang in 1888 were 3,564 piculs nutmegs (2,531 piculs to England, 1,009 piculs to America, 24 piculs to the continent of Europe), and not 2,531 piculs. The crop of this year is said to be of no importance, but in the period from January 1 till June 5 1,524 piculs have already been shipped, against 1,090 piculs in the same period of 1888. From Padang 2,076 piculs, and not about 1,500 piculs, were exported.

As regards the importance of the production of West India sorts, any London broker knows that the report in question is wrong. The production there has of late been steadily increasing, and arrivals so far have been about 460 packages in excess of last year. It is true these packages run but from 10 to 50 kilos., but they are quite sufficient to feed the current demand in London, and have been a stumbling-block to many a sounder rise in values.

The Rotterdam statistics of mace do not agree with the actual position either. For instance, they mention 33,200 kilos. stock from private arrivals which are non-existent. Our opinion that stocks of mace will be sufficient for three months at the outside is based on really small stocks, besides the fact that dealers in Europe are holding no stocks; further, on authentic news, according to which America will be forced to make her purchases here in the near future, as there is no good mace on the spot there, and offers from Penang and Singapore are not forthcoming.

Lastly, we did not intend to prognosticate a decline, in which we do not believe ourselves. Our only intention was to forewarn our friends of the plans of the "ring," and to induce them to make their purchases for probable wants in due time. We believe that we have succeeded in this; and if owners of the "chief stock" stick to their intention to realise at "big profits" only, we feel that they will have to hold their purchases for a long time to come. Opinions in trade matters cannot be proved by figures, because a considerable item, which cannot be expressed in figures, remains unnoticed, and that is the tough resistance with which consumers oppose an artificial rig in prices.

BRIDGET'S favourite perfume—Pat Chooly.

NEGROES AND MEDICINE.—An Indianapolis druggist, according to the *Nens* of that city, believes that a heavier dose of medicine is required by coloured people to produce results than for whites, and he cites two instances. A coloured man brought him a prescription calling for Fowler's solution of arsenic, five drops to a dose. The druggist warned his customer of the dangerous character of the medicine, and advised him to be particularly cautious. The patient snorted out his contempt for little doses and withdrew. The next day he complained that the medicine was "no 'count," and he told the druggist he "done took as much as a spoonful at a time, and it only made him little sick at the stomach." One day the druggist prepared a bottle of corrosive sublimate as bed-bug poison for a boarding-house keeper. This keeper had in her employ a coloured domestic who was continually "tasting things," and who had an overpowering passion for spirits of all kinds. The bottle was plainly marked "poison," but it fell into the hands of this domestic, it smelt spirituous, and she swallowed a mouthful, but did not like the taste. Her mistress discovered the fact a few minutes after she had taken it, but the domestic was not alarmed, and she fairly had to be driven to the drug store to get an antidote. The druggist was appalled; the idea of the girl walking around and taking things so coolly paralysed him, and he gave her a mixture of mustard and sent her back home, with orders to call a physician at once. She never did call a doctor; the mustard must have done its perfect work, for the girl was running around the next day the same as ever, although complaining of sore throat and an inflamed stomach.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c. will be attended to in the order received.

Openings in Australia.

SIR,—In reply to "Country Chemist," in your issue of April 20, permit me to state that, so far as Victoria is concerned, his remarks are not only uncalled for, but diametrically opposite to the truth. It is with the greatest difficulty that up-country chemists here can obtain assistants. At the present moment I know of several juniors who are in receipt of 2*l.* per week and found. I also know of country chemists requiring juniors, and who are prepared to pay from 30*s.* to 40*s.* per week, with board and lodging, but cannot obtain them. Good senior assistants are also in demand, and can command good salaries, but are almost unobtainable. I can also state for a fact that all the steady, trustworthy chemists who have come to this colony during the past few years have not only done well, but are mostly in business on their own account. His description of the up-country districts may apply to South Australia, but here nearly all our up-country towns can, and do, run from one to three chemists, who are all doing well; and although the stores in South Australia sell tinct. opii, tinct. camph. co., &c., here they cannot do so legally, as our Pharmacy Act prevents it. I believe I am quite justified in stating that the above remarks apply equally to New South Wales. In conclusion, I would suggest to "Country Chemist" that for the future he measures South Australian corn with a South Australian measure, and not run away with the idea that South Australia is Australasia.

Yours truly,

Victoria, June 10. A VICTORIAN CHEMIST. (98/13.)

Test for Antipyrin, &c.

SIR,—I notice in your last issue that a correspondent in the *Pharm. Zeitung* objects to my nitric-acid test applied to discriminate between antifebrin, antipyrin, phenacetin, sulphonal, and urethane, on the ground that the variations in colour are not sufficiently definite. If the gentleman in question had tried the reactions he would have found out his mistake. No one gifted with common sense would dream of judging the results of a test from a description alone, without comparing them with those obtained from a sample of known purity.

Faithfully yours,

Wandsworth, July 29.

A. PERCY SMITH.

Glass Stirring-rods.

SIR,—The greatly diminished calibre of the lowest part of 3*j.* measures is a greater source of annoyance than the rendering of the measure useless for small quantities which ensues when the ordinary glass stirring-rods are employed. On three several occasions I have seen measures broken owing to the weight of the rod falling on the sides of the measure instead of on the bottom. In each instance strong solutions of cocaine were being made. How annoying! "Heder's" suggestion of pointing the rods obviates this danger. The false economy of "Borax" will have taught him that the first expense is always the least.

Yours truly,

L. S. D. (99/6.)

Dog Days.

SIR,—An old gentleman lately brought me the following antidote to hydrophobia, writing out a copy from his grandfather's family recipe-book, which dates from the middle of the last century.

Take of—

Leaves of rue	6 oz.
Garlic bulbs	4 "
Pepper confection	4 "
Senna confection	4 "
Pewter raspings	4 "
Ale	$\frac{1}{2}$ gallon

Mix and boil. Dose: 3 oz. every morning for a dog that is bitten, half as much more for a man or a woman, every morning. The boiled herbs to be applied to the wound as a poultice.

Yours truly,

HEDER. (97/9.)

The Eau de Cologne Prize.

SIR,—The winner of the above will be doing us a favour by stating whether the "drops" of the formula are to be taken as minims when larger quantities are made. One is surprised to find a practical man using such an inexact term as "drops."

Yours truly,

HEDER. (99/32.)

A New "Patent" Suggestion.

SIR,—In answer to "Amicus Verus," of July 27, I cannot see that his scheme could be practical. The time for full prices of patents is past, and, at the present time, not one chemist in fifty gets full prices. (1) You will never get chemists to agree amongst themselves what should be their price for patents. (2) Chemists would never be bound down to charge one price on all patents. (3) Wholesalers we need not trouble about; they are sure of getting their pound of flesh. (4) No chemist, I am sure, would ever guarantee never to recommend his own nostrum when another patent is asked for; he would be acting against his own interests, and depriving himself of the most lucrative and legitimate part of his business.

The time has come for all chemists to put up a good speciality for nearly every ailment, and push their sale by means of counter-bills; it will pay better than selling patents at any price. My suggestion is, for all patent medicine manufacturers to alter their prices from 1*s.* 1*½d.* to 1*s.*, and 2*s.* 9*d.* to 2*s.* 6*d.*, and advertise this price. It is absurd to advertise a price that is never obtained. Who would get 6*s.* for Allen's, or 2*s.* 9*d.* for Eno's?

J. H. (100/23.)

SIR,—Will you allow me to thank those of your readers who have replied to my letter in your last number. I cannot yet form any reasonable idea of the wishes of the trade, and should be glad to receive many more replies from all parts of the country. So far they have been favourable. The question I ask is not whether chemists think the suggestion practicable or not, but whether or no they would be willing to sign if asked. I have undertaken this inquiry solely on my own responsibility, and not at the instigation of any wholesale house or maker of "proprietarys"; and, if any useful results follow, I will not benefit more from them than any other ordinary retailer will. I may say, further, that no subscription will be asked for or expected; all I want is "yea" or "nay." If I receive most "noes," I shall drop the scheme; if most "ayes," what little I can do to promote it will be cheerfully done.

I am as much in favour of pushing home-made articles as anyone, and should send round handbills in thousands just the same; but I cannot help thinking that if we could bring about the change I have advocated, we should all be something in pocket by it.

Thousands of chemists' opinions wanted by

AMICUS VERUS,

Care of C. Washington, Esq.,

52 Foreign Street, Camberwell, London, S.E.

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

An Application.

SIR,—I had the following liniment to dispense the other day, which seems to be unmixable. What ought to be done so that it would be in a fit state to send out?—

Ung. resinæ	3ij.
Glycerini	3ivss.
Liq. morph. mur.	3j.
Tr. benzoin. co.	3ss.
Ft. liniment.	

APPRENTICE. (90/10.)

The Plaster Difficulty.

SIR,—The belladonna and carbonate of ammonia plaster referred to by "Pyrophosph" does not present the difficulty one might imagine at first sight. I made the same plaster a few weeks ago, and certainly a more satisfactory one I never made. My *modus operandi* was as follows:—First melt the belladonna plaster in a water-bath, stir in the carbonate (previously powdered very fine), and spread on the leather with a palette knife.

Yours, &c.,

Liverpool.

OPOPONAX. (96/49.)

Mixture and Ointment.

How should the following prescription be prepared?—

Sodii bromid.	3iss.
Ferri bromid.	3ij.
Sol. Fowleri	3j.
Tr. nucis vom.	3iij.
Aq. chlorof. ad	3viij.
M.	
Lanolin	3j.
Liq. potas. iodid. c. sapon.	3j.
Ft. ung.	

L. (94/50.)

[*The Mixture.*—Dissolve the sodium bromide and the ferrous bromide in the chloroform water and add the tincture of nux vomica and Fowler's solution. Use a "shake" label.

The Ointment.—Put the lanolin in a mortar, add the lin. pot. iodid. c. sapon. a small quantity at a time, so as to form a soft creamy ointment. The liniment should be B.P. (made with curd soap), and not in two layers, as it is sometimes found when old or badly prepared.—ED.]

Camphor Monobromide Mixture.

SIR,—Will you kindly inform me if it is possible to make a clear mixture of the following, and the best way of dispensing it?

Yours faithfully,

W. S. (99/58.)

Potass. bromid.	gr. 48
Ammon. bromid.	32
Sodii bromid.	20
Camph. monobromid.	20
Spt. chlorof. co.	3iss.
Aque ad	3viij.
M. Ft. mist.	

[A clear mixture cannot be made, as the camphor monobromide is insoluble in water. Dissolve the salts in 7 oz. of water, and add 2 drachms of mucilage to the solution. Next dissolve the monobromide in the spirit of chloroform, and pour into the salt solution. Shake, and make up to 8 oz.—ED.]

An Ointment Wrinkle.

SIR,—I find that aqueous liquids, such as liq. plumbi, can be incorporated with adeps, ungt., &c., in a marvellously short time, as compared with the ordinary method of using the flat of the spatula, by simply adding the liquid to the adeps, &c., on a slab, and scoring it with the edge of the

spatula. It is taken up almost immediately in that way, and saves a lot of time, and also prevents the liquid spurting about. I would advise dispensers to try it, and see what a lot of time and patience a little wrinkle of that kind saves.

Yours faithfully,

Teignmouth, July 24.

JNO. E. RYDER.

LEGAL QUERIES.

92/74. *C. B. S.*—The Board of Inland Revenue are acting quite within their statutory powers by making conditions about the sale of methylated spirit, or even in refusing a licence altogether, you holding a licence for the sale of wines and spirits. The condition they impose is quite usual. We thought it was universal.

88/74. *Annesley.*—The firm you name have at least the moral right to the exclusive use of the titles which they have made popular. We do not undertake to make searches in the trade-mark register for subscribers, and if we did so in this case, and found that the particular titles as you quote them were not registered, we should be far from saying that others could employ them with impunity. A court of equity will still protect a proprietor from unfair competition.

6/90. *Maximum.*—Apprentices' grievances are usually very solemn, but yours seem to overshadow any we have yet heard of. Your master would not have a legal right to open and keep your letters, and we should think you have a reasonable claim to some little holiday during the year, though we do not know that you could make a legal claim of it. But when you ask, "must an apprentice that has no Sunday duty attend sermons all day?" we are somewhat staggered. You are a little vague, as you will perceive. Probably you mean all Sunday; but even that seems pretty stiff. Clearly, we cannot answer such questions as you put without a much more complete knowledge of the circumstances.

97/65. *Gas.*—You have probably signed some agreement with the gas company, and this might affect your liability for the cost of the tap. Just on the facts as you state them it seems as if it were the business of the gas company to pay, but we presume they have some good ground for charging you, and we advise you to see the manager and settle such a trifle without law.

98/60. *Cinchona.*—A plucked Minor man is not justified in describing himself as a "wholesale and retail druggist and drysalter." He may make and sell patent medicines, even if they contain poison, but it has never been legally decided what are patent medicines. He may not otherwise sell any poison scheduled in the Pharmacy Act (see DIARY for list). Oxalic acid is one of these.

95/11. *Electro* asks what is the custom in the trade regarding payment of outdoor assistants during holidays. So far as our own knowledge goes, assistants are paid during the holidays which are allowed them, but there is no legal claim to such payment unless it is created by a specific agreement.

95/49. *Ernst.*—It does not seem to us that the dentist who took your room for his practice has any claim for goodwill if he voluntarily gives up the tenancy, or if he took it for a specified time. There might be an equitable claim if he took the apartment for an indefinite period, and, having worked up a valuable practice, you should evict him and sell the practice to another dentist, or take it yourself; but we should not expect he could recover even in such a case, unless he had an agreement, which gave his case some support.

96/20. *Vaseline* asks if he can use the words "fruit salt" for his saline preparation. He understands Mr. Eno has lost

the exclusive use of these words. The Court of Appeal overruled the decision of Mr. Justice Kay in the case of Eno's and Dunn's trade-mark, and clearly decided that Mr. Eno was not entitled to the exclusive use of the words "fruit salt." But in allowing Dunn's trade-mark to be registered, the Court laid great stress on the fact that the use of such words in connection with baking-powder was not calculated to deceive, as no one would be likely to want to drink a preparation of baking-powder. It is quite possible, however, that if any person puts up a saline preparation and calls it "Fruit Salt," the Court may hold that there was an intention to deceive. The mere use of the words "fruit salt" would be strong presumptive evidence of a fraudulent intention, Eno's preparation having been so extensively advertised. Very great care, at all events, would have to be used in putting up the goods, so that none except a fool or an idiot could possibly be deceived. A purchaser asking for "Fruit Salt" is not expected to scrutinise his purchase to see that he gets what he asked for. It must also be borne in mind that there may be a qualified property in words without the exclusive right to them, although such words may be incapable of registration as a trade-mark. It is always a matter of evidence and argument as to whether a person who has, by advertising, given publicity to an article under a certain name not before applied to such article is not entitled to restrain others from calling the same class of goods by the same or a similar name, as being calculated to deceive, and to lead to the impression in a purchaser's mind that he is buying the well-known goods, when in fact he is buying those of some other manufacture. The decision of the Court of Appeal, however, amounts to this, namely, that the use of the words "fruit salt" is not *per se* actionable. There is no doubt, however, that if the words are applied to a similar kind of preparation to Eno's the Court would look very jealously at the general get-up of such preparation, and the label, directions, circulars, show-cards, wrapper, and other matters used therewith, to see if there was any imitation of those of Eno, or any indication of a desire or intention to trade on his reputation. The mere possibility of deception—although unintentional on the part of the vendor—is sufficient to justify the interference of the Court by way of injunction.

95/61. *J. F.*—It is certainly not illegal for the parents of the apprentice to pay the costs of the indenture. We believe the usual method is for the parents and master to divide the expense.

100/11. *Invicta*.—Persons on the register of veterinary surgeons as "existing practitioners" have the right to describe themselves as "veterinary surgeons," but must not use any title or description indicating that they are members of the college.

94/53. *J. G.*—The statute 56 Geo. III. c. 53, sec. 3, which dealt with the sale of *cocculus indicus* for adulterating beer, was repealed by a recent statute passed in 1885 (48 & 49 Vic. c. 51, sec. 10). There is no restriction, therefore, on the sale of this drug. The poisoning of fish is, however, unlawful under the statute, 5 & 6 Vic. c. 106, sec. 80, and 13 & 14 Vic. c. 83, sec. 36, another statute. A chemist selling any drug for this purpose, although he might not be held criminally responsible, would lay himself open to very unpleasant comments.

MISCELLANEOUS INQUIRIES.

93/41. *W. Saunders*.—The growth seems to be an aborted bud.

97/2. *Sulphur*.—(1) *Litmus* is made chiefly in Holland. The *Rocella tinctoria* grows abundantly on the coasts of Europe and Africa; also in the Azores, Canary Islands, Madeira, &c. (2) *Sulphur Chloride*.—The composition of this article is not definitely known. It is a mixture of sulphur and sulphur chloride (S_2Cl_2), but whether there is any else is not known. The substance can be liquefied by heat.

92/30. *Tropic*.—(1) *Thirst Quencher*.—Make lemon kali into a stiff paste with rectified spirit, and divide into 15-grain tablets, which dry by exposure to the air. One of these is very useful for assuaging thirst. (2) *Chocolate* is much more nutritious than tea and coffee; milk is the best all-round food beverage. (3) *Corpulency*.—There are many methods for the reduction of weight, and the success of each depends greatly upon the constitution of the individual. Corpulent persons should drink a tumblerful of water early in the morning, with, if necessary, a dash of Hunyadi Janos or Friederichsball mineral water in it. Breakfast should consist of tea and plain toast. In the other meals starchy and fatty foods should be avoided; fish is preferable to butcher's meat, and brown bread better than white. Beer and stimulants generally should be avoided. Horse exercise is good, walking better—indeed, one specialist has great faith in simply walking up and down stairs for a short time each day.

96/54. *Semper Fidelis*.—Registering a Trade-mark.—The cost is 25s.—5s. paid on application and 20s. when the design is registered.

96/10. *Kelpie*, and 95/33, *Medicus*.—Read the article in our issue of February 9, page 202, which will give you all the information you require in regard to the preliminary medical examination.

95/65. *Ajax*.—(1) *Sulphur and Arsenic Sheep-dip*.—The dry ingredients are simply mixed together. We do not know how Cooper and others make their specialities. (2) See reply to "Indagator," on page 100 (July 20).

95/69. *Dum Spiro Spero*.—*Sulphonol* [$(CH_3)_2C(C_2H_5)_2(SO_2)_2$] is, as its formula shows, diethyl sulphonic dimethyl methane, and occurs in small colourless crystals. It is a hypnotic, and should be given in 20 to 40 grain doses four hours before bedtime. The drug should be finely powdered. In the last two volumes you will find many notes regarding it.

79/23, *Africa* (Watford); 79/40, *Africa* (London, N.W.); 83/6, *A. D.* (Edinburgh); and 89/1, *T. E. R.* (London, S.W.)—We have noted yours, and shall give the information shortly.

27/7. *Eye Salve*.—The mercuric oxide is partly reduced to the mercurous state by the lead acetate. On treating the ointment with water, the lead acetate and zinc sulphate interact; lead sulphate, coloured by black mercurous oxide, is precipitated. You have correctly made out the composition of the ointment.

98/39. *O. W. A. C.*—Tincture of insect powder, oil of cedar-wood, and some other essential oils, applied to the skin, prevent flies "making a dining saloon of one's features," as you put it.

99/9. *Carboy*.—There is a formula for white oils in the *DIARY*. Consult it, and read the letter on page 215, February 9.

99/5. *G. Grosvenor*.—Thanks. We have no definite information on the point; the formula was supplied by a correspondent, who said the product was *like* the preparation named.

98/65. *Calc. Carb.*—Dispensers are not usually on the staffs of the steamship lines. The surgeons usually do their own dispensing. The only way to get an engagement of the kind is through the surgeon. The most likely lines are those which carry emigrants on long voyages.

97/70. *T. O. H.*—The quantities in the prescription really are:—Cocaine hydrochlorate, $2\frac{1}{4}$ grains, and equal parts of rectified spirit and water to make a mixture measuring $\bar{3}$ iv. $\bar{3}$ vss.

97/61. *Brandish.*—(1) **Liquor Potassæ** (Brandish).—This is made as follows:—

	Parts
American pearl ashes	6
Quicklime	2
Wood ashes	2
Boiling water	60

Add the first two to the water, then the wood ashes; stir well, set aside for twenty-four hours, and decant the clear liquor.

(2) **Artificial Essence of Musk** is made by acting on oil of amber with nitric acid and diluting the product with rectified spirit.

94/52. *Vera Studens.*—The College of Preceptors' examination is the one you should enter for. See our issue of February 9, page 202.

89/68. *Irex.*—**Shale** is a bituminous schist, the valuable portion of which is the organic matter, which Professor Mills believes to exist as $C_6H_{10}O$. See the "Journal of the Society of Chemical Industry," 1885, page 325.

32/27. *H. Maddock.*—Your specimen is the catkin of a *populus*, probably *P. monilifera*, Ait.

91/1. *J. T. Hall.*—A dodder—*Cuscuta Epithymum*, Murr.

50/28. *Apex.*—The Chemical, Geological, and Astronomical Societies, and the Society of Antiquaries, are all located at Burlington House, Piccadilly. The office of the Institute of Chemistry is at 9 Adelphi Terrace, Strand; that of the Geographical Society at 1 Savile Row, W.; and that of the Zoological Society at 3 Hanover Square, W. The Philological Society is quartered at University College, Gower Street.

99/41. *Assistant.*—**Books for the Minor.**—The British Pharmacopœia, "The Art of Dispensing," Wills's "Materia Medica," Bentley's "Structural Botany," Attfield's "Chemistry," Ince's "Latin Grammar of Pharmacy." Note the exchange column and publishers' advertisements in this journal, which will indicate to you how you can obtain the books on the most favourable terms.

100/5. *W. L.*—**Turpentine** is the natural exudation from various species of *Pinus*. Oil of turpentine is distilled from it and yellow resin is the residue. The oleo-resin is not a commercial article at all, but doubtless a wholesale house could get some for you.

79/40. *Africa.*—**Jeye's Purifier.**—Professor Attfield states that it is "a mixture of such fractions of distilled coal creosote as contain the maximum of neutral, basic, and other antiseptic principles, with sufficient alkali and resin to enable the whole to form an emulsion with water."

99/46. *Van.*—**Bleaching Ivory.**—Peroxide of hydrogen is now extensively used for this purpose. The ivory is simply immersed in the solution.

97/54. *Student.*—**Metric System.**—Macmillan publishes at 3d. a booklet by Barnard Smith which will suit you.

57/35. *R.*—Your criticism is somewhat late. We regret that we do not take a fancy to the suggestion you offer, nor do we consider that we owe any "reparation" to the trade.

50/30. *Semper.*—**Kid Reviver.**—Beat up the yolk of an egg with 1 oz. of castor oil, 1 drachm of oil of turpentine, 2 drachms of gum arabic, and 3 oz. of common writing ink. If you wish to keep the preparation, add 5 grains of hydronaphthol dissolved in 1 drachm of methylated spirit.

94/61. *Temperance Wines.*—On pages 249 and 495 of last volume you will find formulæ. If these are not what you require, please write again.

Information Wanted.

[Replies to the following requests are solicited by correspondents of THE CHEMIST AND DRUGGIST.]

89/63. Can you give formula for "fox oils," a preparation used by farmers for putting on sheep to keep away foxes?

93/59. Formula of Hawksforth mixture, as prepared in Sheffield.

95/48. Kerosene—an ointment like vaseline, only darker. Where obtainable?

NEW REMEDIES IN DISORDERS OF THE LIVER.

IN one of his Croonian lectures Dr. Lauder Brunton remarked:—An extended knowledge of pathology is not the only gain we may hope for from a thorough investigation of the action of drugs upon the liver; we may reasonably expect great additions to our power of treating its functional disorders or even organic diseases. I have already mentioned the peculiar effect of ammonium salts upon the glycogenic function. Dr. Stewart's introduction of chloride of ammonium in hepatic abscess is a most important aid in the treatment of that disease. The hiliary function appears to be modified in a remarkable way by many substances of the aromatic series which greatly increase the bile. It is a very remarkable thing that a great number of ptomaines belong to the class of compound ammonias or amines, and the remarkable action of toluylene-diamine appeared to me to indicate the necessity for ascertaining if possible what effect would be produced on the liver by bodies of the aromatic series, free from nitrogen, as compared with the effect of similar bodies combined with ammonia. At my suggestion Dr. Collins made a number of experiments with toluene and toluylene-diamine in my laboratory, and found that both these substances greatly increased the flow of bile. Not feeling quite certain what effect toluylene-diamine and allied bodies might have upon patients, I felt a little chary of using them until I should obtain fuller knowledge of their mode of action. In order to be ready, however, to use them as soon as I had acquired sufficient knowledge, I asked Messrs. Burroughs & Wellcome to prepare me some tablets and capsules containing toluene and toluylene-diamine. This they kindly did, and a gentleman to whom Dr. Collins had mentioned the existence and probable use of the tablets tried them upon his patients with good success, as he informs me.

Most of the vegetable hepatic stimulants, iridin, euonymin, and aloes, belong to the aromatic series, although we do not know their chemical structure. Much benefit is frequently obtained by their use in so-called "biliousness," and we may reasonably expect that a full knowledge of the mode of action and chemical structure of the vegetable cholagogues will enable us, not only to apply them more judiciously, but to modify their structure, and, consequently, their action in various directions, to suit our wants. It is almost certain, also, that we shall obtain a very large series of new bodies which may act upon the liver, either as stimulants or as depressants, increasing or diminishing the formation of bile, and affecting the other functions of the organ, which I have already mentioned. The frequency with which functional hepatic disorder occurs, and the great discomfort which it occasions, not only to the sufferer, but to his friends, and even to the community at large, renders it most desirable that efficient modes of treatment should be discovered.

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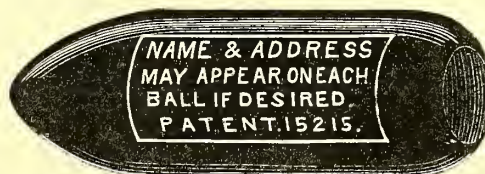
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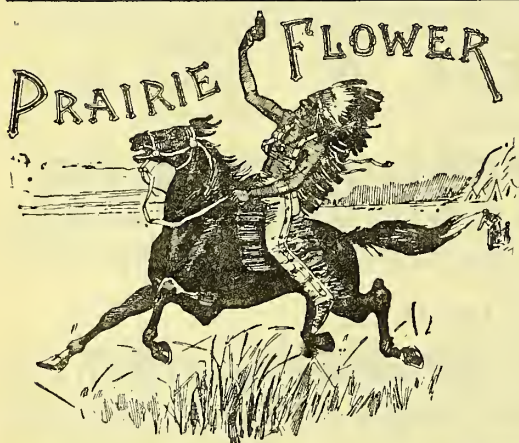
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Dr. RICHARDSON'S Formula, for removing Nævi, &c. In ½-oz. & 1-oz. Bottles, with elongated Stoppers for applying the Caustic, 2s. 6d. & 4s. 6d.; 16-oz., 12s.
STYPTIC COLLOID,
For promoting the Healing of Wounds by the first intent.
In 2-oz. and 4-oz. Bottles, with Brush, 2s. 6d. and 4s. 6d.; 16-oz., 12s.
CHARCOAL CAPSULES
Containing Pure Vegetable Ivory Charcoal.
In Boxes, 2s. 6d. each.

J. ROBBINS & CO.
OXFORD ST. 147

DINNEFORD'S FLUID MAGNESIA



PERFECT IN PURITY AND UNIFORM IN STRENGTH.

The most efficacious antacid and mild aperient for Delicate Constitutions.
Ladies, Children, and Infants.

OF ALL WHOLESALE DRUGGISTS

**Coca
Coca
Coca
Coca**



**Tablets
Lozenges
Elixir
Tea**

SOLE PROPRIETORS—

**THE FRENCH HYGIENIC SOCIETY OF LONDON, 6 CONDUIT STREET, LONDON, W.
REGENT STREET,**

whence will be forwarded to any applicant a Pamphlet containing the testimony of eminent British and Foreign Medical Authorities to the invaluable properties of the Coca Preparations.

"THE CHEMIST AND DRUGGIST" (of March 30, page 429) says—"The French Hygienic Society of London have for some time made a speciality of preparations of the coca leaf, such as coca-tobacco, which were calculated to be used as articles of daily consumption; and they now add to their list several which are designed to maintain the popular use of the Peruvian invigorator. Coca tea—an excellent blend of the coca leaf and a choice Ceylon tea—is likely to be a favourite, for it makes a pleasant beverage of good aroma which is powerfully restorative. Their coca elixir is a good idea. It is intended for use along with any table wine, 15 to 20 drops of it making with a glass of sherry a good coca wine, possessing the full flavour of the leaf. This flavour is a marked characteristic of all the preparations, especially the tablets and lozenges, and is an indication that care has been exercised in their manufacture. The tablets and lozenges may be used for throat troubles; and those without borax are a portable form of the restorative for use by athletes and pedestrians. All these specialities are put up in attractive style."

RETAIL PRICES.

Coca Tablets and Lozenges in boxes, **1/-, 2/6, & 4/-** per Box.

Coca Elixir **3/-** " Bottle.

Coca Tea in tins of 1 lb. **4/-**, ½ lb. **2/-**, ¼ lb. **1/-**.

USUAL WHOLESALE DISCOUNT. CAN BE OBTAINED FROM ALL WHOLESALE HOUSES.

TOWLE'S CHLORODYNE

In **CHOLERA, DIARRHŒA, DYSENTERY, &c.**, it has proved itself a most valuable specific, quickly relieving the pain and spasms, and seldom failing to check the disease; for which property, as well as for its value in Sea Sickness (for which it is the best remedy known) it should be an indispensable article in every emigrant's outfit.

**THE BEST
BASIS FOR A MIXTURE FOR
DIARRHŒA
SPASMS.**

Refuse Cheap
Imitations.

LIQ. CHLORODYNI.

SHAKE THE BOTTLE.

PREPARED AT THE
Chlorodyne Manufactory, *A. P. Towle*
MANCHESTER.

Refuse Cheap
Imitations.

REVISED PRICE LIST.

	Retail.	Per doz
	s. d.	£ s. d.
Towle's Chlorodyne	1 1½	0 8 6
Ditto	2 9	1 3 0
Ditto (3 fluid oz.)	4 6	1 16 0
Ditto (8 ")	11 0	4 13 0
Liq. Chlorodyni (Original and only Genuine Preparation) ½ lb. ..		1 10 0
Ditto ditto ½ lb. ..		2 14 0
Ditto ditto 1 lb. ..		4 16 0
Winchester Quarts (6 lb.) 7/6 per lb., bottles free.		
Towle's Antibilious Pills	1 1½	0 8 6
Ditto	2 9	1 3 0
Towle's Chlorodyne Lozenges }	0 7½	0 5 3
Ditto Jujubes }	1 1½	0 8 6
Ditto in bulk, bottles free, containing		
1 lb., 2/9 each.		
Ditto ditto 1 lb. 10 oz., 4/8 "		
Ditto ditto 4 lb., 10/- "		
N.B.—The Commissioners will allow them to be sold by the retailers without further duty, provided they are simply wrapped in paper, and not enclosed in a box, bottle, or packet.		
Thornton's Celebrated Toilet Cream	1 0	0 9 0
Ditto	1 6	0 14 0
Ditto	2 8	1 4 0
Amboline (Registered Trade Mark)	2 6	1 4 0
The Thornton (Red) Lotion (Stamped)	2 6	1 4 0
Thornton's Paragon Hair Wash	1 0	0 9 0
Ditto	2 6	1 4 0

Posters, Bills, and Showcards on application.

£5 worth (assorted or otherwise) Carriage Paid.

7 lb. Lozenges and upwards stamped with Chemists' own name, free of charge.

A. P. TOWLE & SON,

75 BACK PICCADILLY,
MANCHESTER, December, 1888.

"Instantaneous, Warm, and Soothing."

THE OLDEST ESTABLISHED WHOLESALE HERBALISTS IN THE UNITED KINGDOM,
UPWARDS OF A CENTURY AND A HALF.
Prize Medals were Awarded to us at the Great International Exhibitions 1851, and 1862, for THE GENERAL
EXCELLENCE OF OUR GOODS.

BUTLER, McCULLOCH & CO.

COVENT GARDEN MARKET, LONDON,

THE CROWN AND THISTLE BRAND PACKET HERBS
(MEDICINAL AND CULINARY)

For neatness and attractiveness in appearance have no equal in the market; the boxes can be opened and contents examined and closed up again without rendering the packet unsaleable. The MEDICINAL BOXES have the properties and uses, with full directions for preparation, and the name and address of our customer, printed on each box, and a supply of descriptive pamphlets for distribution sent to every purchaser.

REGISTERED TELEGRAPHIC ADDRESS—"ANTIQUITY LONDON."

IMPORTERS & EXPORTERS OF ALL KINDS OF HERBS, &c., IN BULK.

PRICE LISTS, SAMPLES, AND SPECIALLY LOW QUOTATIONS ON APPLICATION.



YOUNG & POSTANS, BISMUTH, PEPSINE & STEEL

GRAN. EFFER. BISMUTH AND PEPSINE
GRAN. EFFER. BISMUTH, PEPSINE AND STRYCHNINE
GRAN. EFFER. BISMUTH, PEPSINE AND QUININE
GRAN. EFFER. BISMUTH, IRON AND QUININE
GRAN. EFFER. BISMUTH CITRATE
GRAN. EFFER. BISMUTH, IRON AND STRYCHNINE
GRAN. EFFER. CITRATE OF CAFFEINE.

GRAN. EFFER. IRON AND BISMUTH
GRAN. EFFER. IRON, QUININE AND STRYCHNINE
GRAN. EFFER. IRON AND ARSENIC
GRAN. EFFER. IRON AND PEPSINE
GRAN. EFFER. IRON AND QUININE
GRAN. EFFER. IRON, QUININE AND PEPSINE
GRAN. EFFER. HYDROBROMATE OF CAFFEINE.

AND ALL OTHER GRANULAR PREPARATIONS.

Now prepared only by CURTIS & COMPANY, 48 Baker Street, Portman Square, LONDON, W.

GRANULAR EFFERVESCENT ANTIPYRIN.

(Each Teaspoonful contains 8 grains.)

Introduced by Curtis & Co.

See that this preparation bears our name.

PURE CARBONATE OF LITHIA

Price 1,400 fcs. per 100 kilos., or £27 15s. per cwt.

Also all other LITHIA SALTS.

Iodoform, Mercurial Salts, Osmic Acid, Liquid Chloride of Methyl, for the treatment of Rheumatism, Neuralgia, &c.
Tannin, Tartar Emetic, Chloral, Terpene.

SILVER BLACK FOR JEWELLERY.

BILLAULT, 22 Rue de la Sorbonne, PARIS,

Successor to FONTAINE, PELLETIER, & ROBIQUET, Members of the Paris Institute.

PARIS UNIVERSAL EXHIBITION, Classes 45 & 51.

TARTARIC ACID

Technically Pure, in Crystals and Powder, of best quality only; also Chemically Pure;

OF THE

Nienburger Weinsteinsäurefabrik

IN NIENBURG a. d. WESER.

SOLE AGENTS FOR THE UNITED KINGDOM—

OSCAR ANDREAE & CO.

26 GREAT TOWER ST., LONDON, E.C.

SOZOIODOL V. IODOFORM

SOZOIODOL combines the antiseptic powers of Carbolic Acid with the alterative properties of Iodine.

SOZOIODOL is odourless, non-poisonous, and free from the toxic effects so frequently experienced from Iodoform.

SOZOIODOL COMBINATIONS

With Potassium, Sodium, Zinc, and Mercury, have proved most efficient specifics against Diseases of the

NOSE, THROAT, AND LARYNX
(Ozoena),

GENERATIVE ORGANS
(Gonorrhœa, Syphilis, etc.)

SKIN DISEASES, SUPPURATING WOUNDS, CANCER,
and have also been applied with great success in

GYNÆCOLOGICAL AND OBSTETRIC PRACTICE, as well as in DENTAL & VETERINARY SURGERY.

Sole Maker and Patentee, H. TROMMSDORFF, ERFURT, GERMANY.

Samples, Medical Reports, and full particulars free of charge on application to

Mr. FREDERICK BOEHM, 27 Billiter Square Buildings, LONDON, E.C., Sole Agent for U.K. and Colonies

"CUTTING COUNTERACTED."

MOONSEED BITTERS brings FULL PRICES.

WHY?

Because every one who retails Moonseed Bitters has to sign an Agreement or Contract in the following terms:—



MOONSEED BITTERS.

Above is Facsimile of
THE WRAPPER LABEL
 of the 2/9 size.
 It is also sold at 4/6.

MOONSEED OINTMENT.

Retails at 1/1½, 2/9, 4/6 per box.

Memorandum of Agreement made this.....day of..... 1889, between A. E. POWELL & COMPANY, of Swindon in the County of Wilts, Proprietors of the Moonseed Bitters and Moonseed Ointment (hereinafter called the "Vendors"), of the one part and of (hereinafter called "the Purchasers"), of the other part.

Whereby it is mutually agreed between the said parties hereto as follows:—

In consideration of the Vendors selling to and supplying the Purchasers with Moonseed Bitters, Moonseed Ointment, and other preparations manufactured and sold by them (hereinafter termed "the Goods") at their usual prices, the Purchasers will observe and perform the following terms and conditions:—

1. The Purchasers to sell the Goods retail for full printed prices only, and for each and every Bottle or Box of Moonseed Bitters, Ointment, or Pills sold by him or them at any less price, without the written consent of the Vendors, the Purchasers shall pay to the Vendors the Sum of Twenty Shillings in the nature of a penalty, to be recoverable as ascertained liquidated damages.

2. The Purchasers not to supply any Wholesale House nor to sell the Goods wholesale to any Chemist or Druggist or Medicine Vendor who will not previously enter into an Agreement to retail the same at prices in accordance with the preceding Clause No. 1 of these presents.

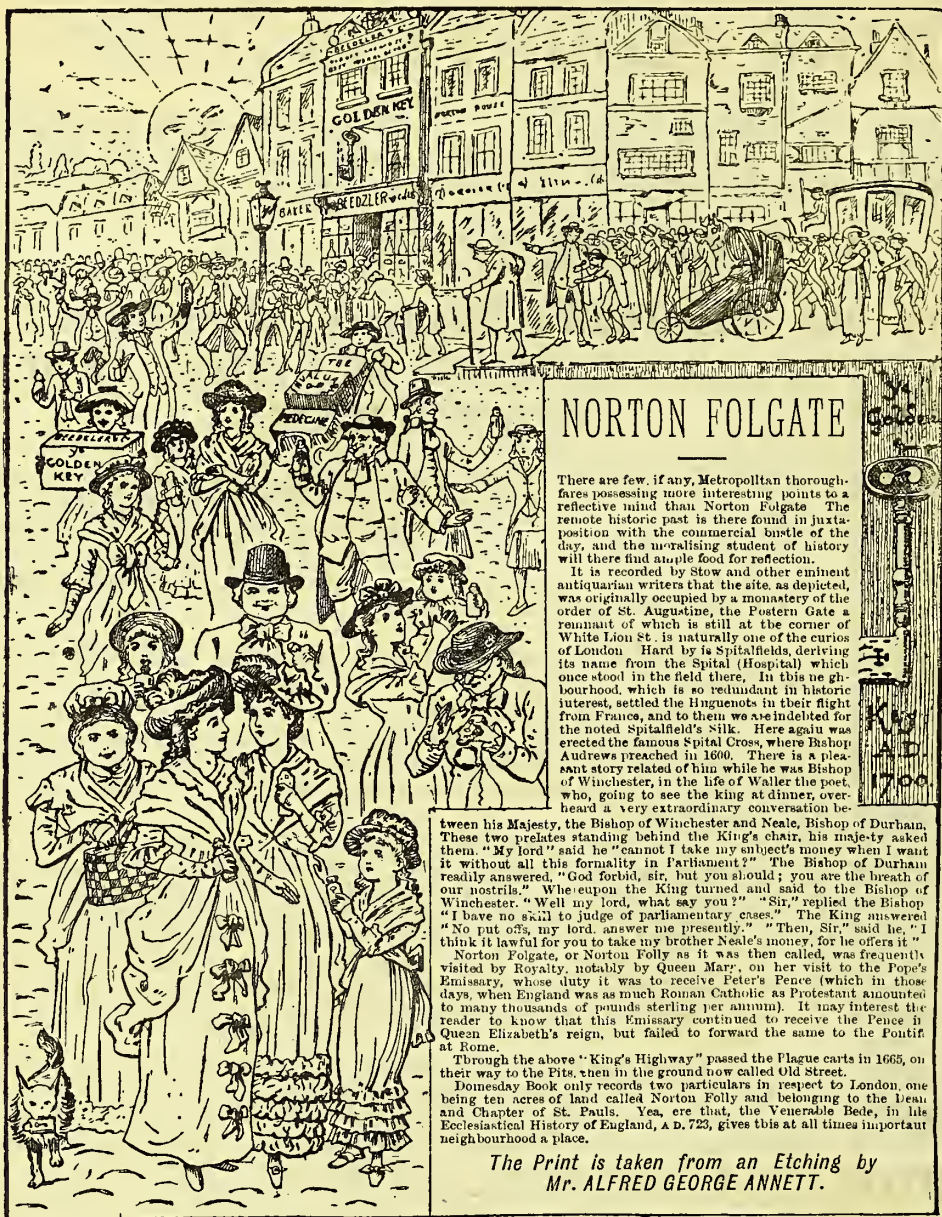
All Purchasers who have signed a similar form of Agreement to the foregoing will be supplied upon the Vendors' usual trade terms, but those Purchasers who do not sign a similar form of Agreement to be supplied upon the following terms only, namely:—**RETAIL**, 4s. 5d. for each and every 4s. 6d. Box or Bottle, 2s. 8d. for each and every 2s. 9d. Box or Bottle, and 1s. 0½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. **WHOLESALE**, 4s. 4d. for each and every 4s. 6d. Box and Bottle, 2s. 7d. for each and every 2s. 9d. Box or Bottle, and 11½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. This Agreement and the terms and conditions herein contained to remain in full force and virtue for the term of 7 years from the first day of March, 1889.

As witness the hands of the said parties hereto the day and year first above written.

We call attention to the important steps which we have taken to prevent our specialities being retailed at less than the advertised prices, and we ask the co-operation of the Trade in maintaining the integrity of the scheme whereby the sale of our preparations may always be retained by the legitimate trade. We will not only endeavour, by all means in our power, to prevent the advertised prices being "Cut," but will give Chemists every assistance and facility for making this a large as well as a paying business.

Please write for Terms and Form of Agreement. NOTE that we allow retailers of Moonseed Bitters 2s. 6d. per thousand for the Distribution of Pamphlets.

A. E. POWELL & CO., SWINDON.



DYNAMITE SCARE AT ACTON.

Vide THE COUNTY OF
MIDDLESEX INDEPENDENT,
Nov. 8th.

ABOUT a week ago a plain deal box addressed to the "Inspector in charge" was duly delivered by the Parcels Delivery Company to Mr. Inspector Swords at the Acton Police Station. In these days of dynamite and such other pleasant novelties, the police have been taught to be cautious, and it was deemed prudent to keep the box unopened for two or three days whilst waiting instructions. However, it suddenly dawned upon the mind of one intelligent Officer that "murder was in the air," and that the opening of that box would lead on to discovery and—promotion. A Council of War was held, and it was decided that Inspector Swords should unravel the mystery by opening the box. The Inspector went cautiously but boldly to work, whilst the terror depicted on the faces of some of those present is described as being intense, but it was still more intense when the lid was fairly raised, and they beheld a number of those deadly weapons of destruction—cartridges. Down went the lid again with a bang, and a telegram was about to be

NORTON FOLGATE

There are few, if any, Metropolitan thoroughfares possessing more interesting points to a reflective mind than Norton Folgate. The remote historic past is there found in juxtaposition with the commercial bustle of the day, and the moralising student of history will there find ample food for reflection.

It is recorded by Stow and other eminent antiquarian writers that the site, as depicted, was originally occupied by a monastery of the order of St. Augustine, the Eastern Gate a remnant of which is still at the corner of White Lion St. is naturally one of the curios of London. Hard by is Spitalfields, deriving its name from the Spital (Hospital) which once stood in the field there. In this neighbourhood, which is so replete with historic interest, settled the Huguenots in their flight from France, and to them we are indebted for the noted Spitalfields's Silk. Here again was erected the famous Spital Cross, where Bishop Andrews preached in 1600. There is a pleasant story related of him while he was Bishop of Winchester, in the life of Walter the poet, who, going to see the King at dinner, overheard a very extraordinary conversation between his Majesty, the Bishop of Winchester and Neale, Bishop of Durham.

These two prelates standing behind the King's chair, his majesty asked them, "My lord," said he, "cannot I take my subject's money when I want it without all this formality in Parliament?" The Bishop of Durham readily answered, "God forbid, sir, but you should; you are the breath of our nostrils." Whereupon the King turned and said to the Bishop of Winchester, "Well my lord, what say you?" "Sir," replied the Bishop, "I have no skill to judge of parliamentary cases." The King answered, "No put off, my lord, answer me presently." "Then, Sir," said he, "I think it lawful for you to take my brother Neale's money, for he offers it."

Norton Folgate, or Norton Folly as it was then called, was frequently visited by Royalty, notably by Queen Mary, on her visit to the Pope's Embassy, whose duty it was to receive Peter's Pence (which in those days, when England was as much Roman Catholic as Protestant amounted to many thousands of pounds sterling per annum). It may interest the reader to know that this Embassy continued to receive the Pence in Queen Elizabeth's reign, but failed to forward the same to the Pontiff at Rome.

Through the above "King's Highway" passed the Plague carts in 1665, on their way to the Pits, then in the ground now called Old Street.

Domesday Book only records two particulars in respect to London, one being ten acres of land called Norton Folly and belonging to the Dean and Chapter of St. Paul's. Yet, ere the time of the Bede, in his Ecclesiastical History of England, A.D. 723, gives this at all times important neighbourhood a place.

The Print is taken from an Etching by
Mr. ALFRED GEORGE ANNETT.

despatched to Scotland Yard, when the "happy thought" struck the inspector that cartridges are innocent things in themselves, and that even if clockwork or some other ingenious mechanism had been inserted in the box to cause an explosion, it had either run down, or had never been wound up, or they would all have been in eternity long ago. He once more raised the lid and proceeded to examine one of the supposed cartridges. The first wrapper was taken off. Silence reigned supreme and the terror was deeply intensified. The second wrapper was unfolded. The terror was now extreme, as exposed to view, they saw not a cartridge, but a bottle filled with a dark suspicious looking fluid, labelled with this inscription, "To be taken every two hours whilst the cough is troublesome." The agony ceased and hilarity prevailed. The murder was out. An enterprising Firm in Norton Folgate (J. Beedzler & Co.) have patented "ANNETT'S COUGH BALSAM," and the box contained a bottle of the Mixture for each officer attached to the Acton Station. We will only express the hope that the Mixture may effect as great relief when taken according to the directions to counteract the effects of the present foggy weather, as was experienced by the whole of the men present when the contents of that box became known.

JOHN BEEDZLER & CO.

WHOLESALE AND RETAIL CHEMISTS,

18 NORTON FOLGATE, E.C.

(Opposite Worship Street, and near the Bishopsgate Low Level Station.)



IMPORTANT TO CHEMISTS.

Chemists are invited to write at once for our

ILLUSTRATED CATALOGUE

OF

DRUGGISTS' SUNDRIES

SHOW CASES, SHOP FITTINGS,

AND

SURGICAL INSTRUMENTS

Patent Medicines

AND

PROPRIETARY ARTICLES.

*Forwarded post free on application
to any part of the World.*

See our Advertisement
(8 pages) in the Special
Summer Number of THE
CHEMIST AND DRUGGIST,
Saturday, July 27.



THOMPSON, WALTERS, HOLE & CO., Ltd.
CURTAIN ROAD, LONDON, E.C.



We would call
attention to the fact
that we are the Sole
Proprietors and Manu-
facturers of the following

Feeding Bottles,

The "Beatrice,"

"Bristol," "Mater," "Imperial,"

"Standard," and "Tropical,"

and we are able to supply these on most advantageous terms.

CHEST PROTECTORS

AND

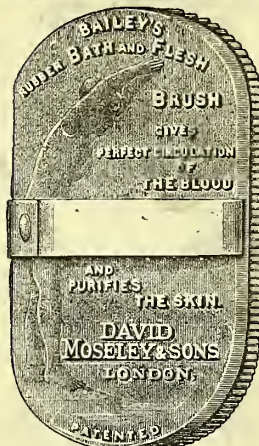
WASHING GLOVES.

*As we manufacture these goods ourselves we are enabled to offer exceptional prices,
and would respectfully invite all Chemists to write for quotations.*

THOMPSON, WALTERS, HOLE & CO., LTD.

CURTAIN ROAD, LONDON, E.C.

BAILEY'S RUBBER BRUSHES.



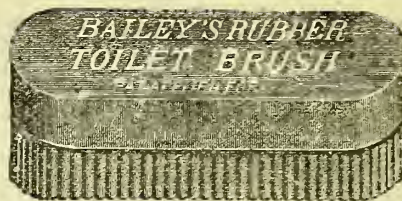
Our Bath and Flesh Brushes have been so well received by the trade, and have met with such ready sale, that it is unnecessary for us to say anything in praise of them here. We shall continue to make them of the very best quality of rubber obtainable, and, as we are advertising them largely, we have every confidence that they will continue to sell well.

PRICE

(in neat metal cases and with wood handles),

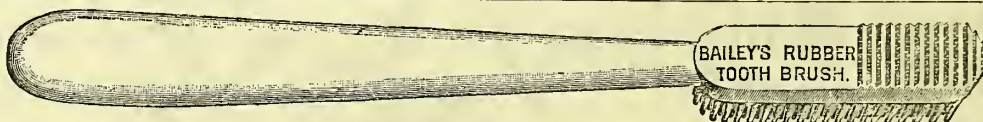
£2 2s. per dozen.

CLEAN HANDS.



Nothing has ever been invented that will so thoroughly cleanse and whiten the hands as our rubber brushes. Used with soap and water they will remove all kinds of stains without injuring the most delicate skin. They are made of the best Pará Rubber, and will last for years.

Price 1s., 2s., and 2s. 2d. each retail, or 8s., 17s., and 18s. per dozen.



We are just now introducing our tooth brushes. They are made in two sizes, of the best rubber, and are certain to give satisfaction. For cleaning artificial teeth they have no equal. Our prices are 6s. and 6s. 6d. per dozen. Samples at the dozen prices will be sent to any chemist who may wish to see what the goods are like. The brushes will speak for themselves.

PRICE LISTS, AIR GOODS, WATER BOTTLES, SPONGE BAGS, ELASTIC BANDAGES, &c., UPON APPLICATION.

DAVID MOSELEY & SONS,
MANUFACTURERS,

{ 14 Aldermanbury Ave., LONDON, E.C.; Ardwick, MANCHESTER
57 Miller Street, GLASGOW; BRUSSELS and PARIS.

FLESH GLOVES.



SOLPORT BROTHERS,

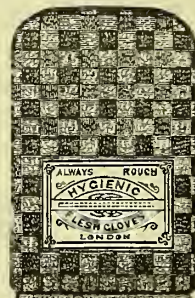
68 SHAFTESBURY ST., NEW NORTH ROAD, LONDON, N.

MANUFACTURERS (WHOLESALE ONLY) OF

FLESH GLOVES

CORN & BUNION PLASTERS

& CHEST PROTECTORS.



PRICE LISTS AND SAMPLES ON APPLICATION.

DUKAS & CO., 20 RED LION SQUARE, LONDON, W.C.

WHOLESALE BRUSH & COMB MANUFACTURERS

(BEST AND CHEAPEST IN EXISTENCE).



ILLUSTRATED LIST OF FANCY BRUSHES

(100 pages) JUST PUBLISHED, AND CAN BE HAD ON APPLICATION.

Telegraphic Address—"DUKAS LONDON."

Telephone No. 2727

FIRST-CLASS MEDICATED & TOILET SOAPS

MADE BY

P. GELSTON & CO.

Manufacturing Chemists, 31 China Lane, Manchester

These Soaps sell readily, and give great satisfaction. Prices and

Samples on application.

PREPARED SUET of the Finest Quality, for Pomades, Cold Cream, &c., 8d. per lb.; 14 lbs., 7d.

SPONGE IMPORTERS.

M. PETERSON & CO.

(ESTABLISHED 1870),

75 ST. ANNE STREET, LIVERPOOL.

FOR HOME, FOREIGN, & COLONIAL MARKETS.

S. MAW, SON & THOMPSON'S BATH GLOVES, RUBBERS, &c.

	Gloves. (Pairs.)	Straps.	Pads.		Gloves. (Pairs.)	Straps.	Pads.
CALEFACIO OR BADEN, No. 1, soft Brown per doz. 5/4 & 6/0	9/0	5/4		HONEYCOMB, White. per doz.	5/4	9/0	5/4
CALEFACIO OR BADEN, No. 2, hard Brown . . . per doz. 6/0	9/0	5/4		REVERSIBLE, No. 1, one side soft Brown, the other best White Turkish . . . per doz. 6/8	11/0	5/4	
CALEFACIO OR BADEN, No. 3, soft Brown, assorted patterns, per doz. 6/6	9/0	5/4		REVERSIBLE, No. 2, one side hard Brown, the other White Honeycomb . . . per doz. 6/8	11/0	5/4	
CALEFACIO OR BADEN, as- sorted patterns, export quality, per doz. 4/0	(Red labels)			REVERSIBLE, No. 3, one side Egyptian Loofah, the other best White Turkish, per doz., single	4/0	13/0	—
CALEFACIO (the U.S.), Striped soft Brown . . . per doz. 6/6	9/0	5/4		PADS, per doz., 3/6		5/-	
TURKISH THIN WHITE GLOVES, per doz. pairs, 2/9 & 3/-				4/9 & 6/-			
Ditto BEST QUALITY	...	..		6/8			
FLANNEL ... ..	...	..			

S. MAW, SON & THOMPSON, LONDON.

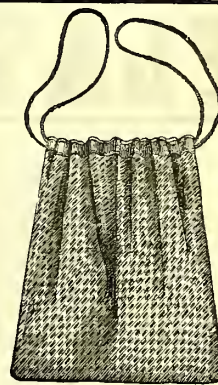
S. MAW, SON & THOMPSON'S

SUPERIOR QUALITY

WATERPROOF CHECK SPONGE BAGS.

No. 1	2	3	4	5	6
7×6	8×7	9×8	10×9	11×10	12×11 inches.
6/0	7/0	9/0	11/0	12/6	16/0 per dozen.

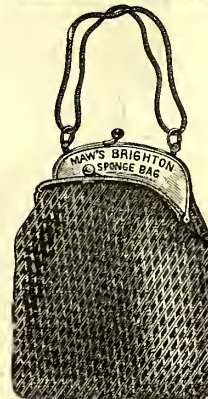
For other descriptions see Quarterly Price Current, page 84.



S. MAW, SON & THOMPSON'S BRIGHTON SPONGE BAGS,

WITH BALL CLASP FASTENINGS, NICKEL-PLATED.

	No. 2	3	4	5	6
	8×7	9×8	10×9	11×10	12×11 inches.
CHECK... ..	16/0	18/0	20/0	26/0	28/0 per dozen.
PAISLEY	18/0	20/0	22/0	28/0	32/0 "



THE BRIGHTON
SPONGE BAG.

7 to 12 ALDERSGATE STREET, LONDON.

BOTTLES.

In addition to our ordinary No. 1 and 2 quality of Bottles, the former being the kind generally supplied by us to Chemists, and the latter to Doctors (price lists of which will be sent on application), we are now supplying a specially cheap Vial, 3, 4, 6, and 8 oz. flat, and Feeding Bottles.

$\frac{1}{2}$ oz. Vial (Blue Tinted)	2/6	3 oz. Flats (Blue Tinted)	5/
1 oz. " " "	2/6	4 oz. " " "	5/6
2 oz. " " "	3/6	6 oz. " " "	6/6
		8 oz. " " "	6/10

White Flint Glass Screw Feeding Bottles, fitted with Best Black Tubing, 36/- per gross.

Free Packages. Quotations given for Bottles to any shape, size, or colour required.
Send Samples and state quantity wanted.

GEORGE TAYLOR & CO. (L^D), SEEL STREET, LIVERPOOL. DISPENSING BOTTLES & PHIALS

The following are our greatly Reduced Prices:—

CLEAR BLUE TINTED.

3 and 4 oz.	6/6 per gross.	12 oz.	11/6 per gross
6 and 8 oz.	7/6 " "	16 oz.	15/6 " "

WHITE MOULDED PHIALS. LONG OR SQUAT SERIES.

$\frac{1}{2}$ oz.	3/0 per gross.	$1\frac{1}{2}$ oz.	4/3 per gross
1 oz.	3/6 " "	2 oz.	4/8 " "

Prompt attention to country orders. Packages 1/ each, allowed for if returned. Sample bottle sent free on application.

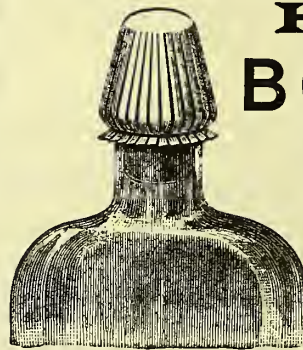
I. ISAACS & CO.

GLASS BOTTLE MANUFACTURERS.

25 Francis St., Tottenham Court Road, London, W.C.

Established upwards of 70 years.

Bankers, London and Westminster



HUNT'S BOTTLE CAPS

Pleated Paper, from 8d.
per Gross.

LONDON:

25 Great Windmill St., W.

Depot of DIGNE'S ENZYMES.

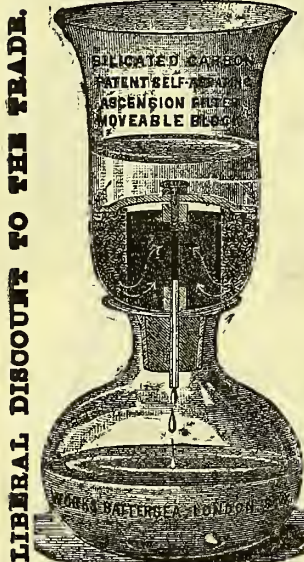
FLATNESS OF TASTE

SO COMMON IN FILTERED WATER,

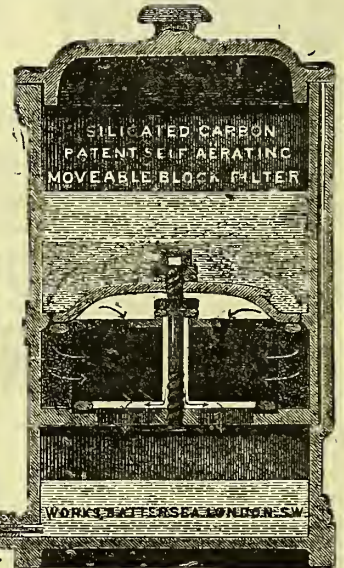
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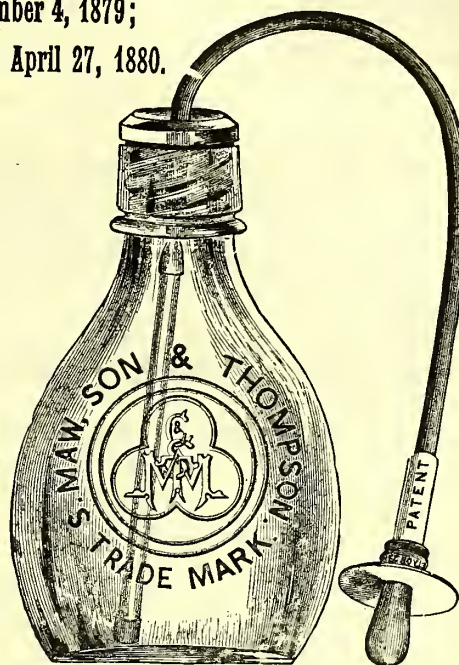
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Alexandra, Glass Screw Stoppers	4/-	8/-	11/-	4/6	8/6	12/-
Export, China or Wood Top Corks	3/6	—	—	4/-	—	—
Export, 2nd Quality, Wood Top Corks ...	2/9	—	—	3/3	—	—
Export, Earthenware Caps	—	7/3	—	—	8/-	—
Export, Glass Screw Stoppers	4/-	7/6	—	4/6	8/-	—

FOR FURTHER PARTICULARS SEE QUARTERLY PRICE CURRENT, PAGES 65 AND 66.

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IN AIRTIGHT WATERPROOF & ODOURLESS PACKAGES
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1/6 Diamond Dyes 3/2	1 1/4 Woodward's Gripe Water 8/6	1/6 Spratts Dog Soap 3/3
1/6 Lineham's Hair Regenerator 9/6	1/14 Kompo 8/6	1 1/4 Soden Mineral Pastilles 9/9
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2/9 22/6	2/6 17/6	Balsam (both slightly soiled), per doz., 6/.
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Permanganate of Potash Crystals, per lb., 9/.		
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Powdered Cassia, Best, per lb., 5; 14 lbs. for 5/6.		
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Orange Quinine Wine, P.B., made with Howard's Quinine, in bottles, 6 to		
ga., per doz., 14/; in bottles, 12 to 13 to ga., 7/ per doz.		
Milk of Glycerine and Cucumber, 8/ per lb.		
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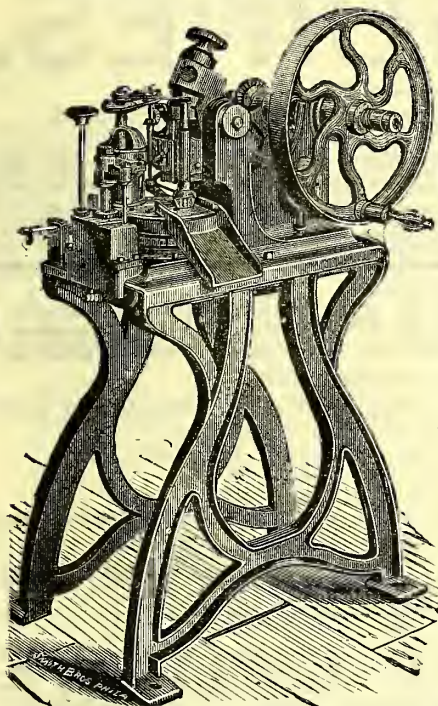
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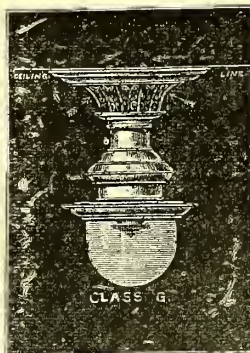
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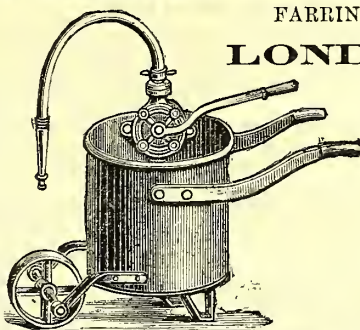
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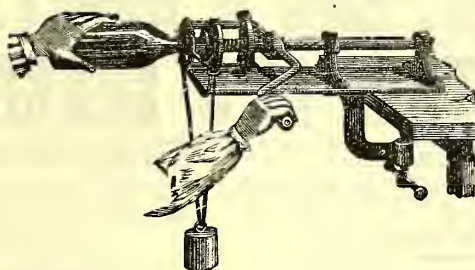
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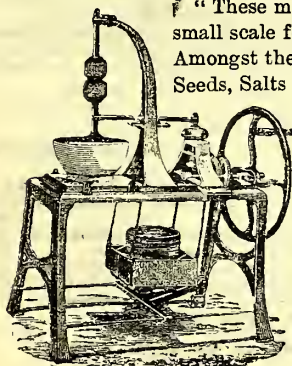


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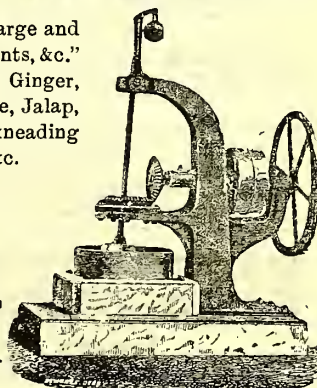
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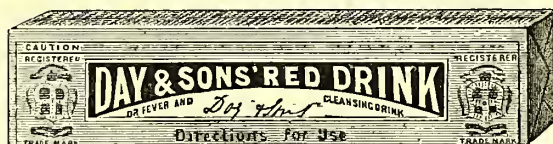
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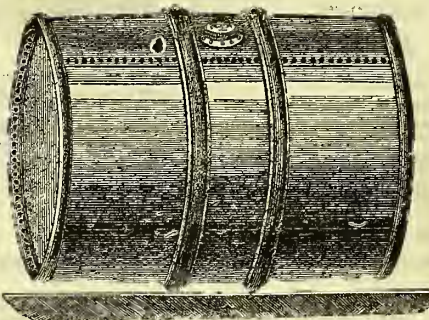
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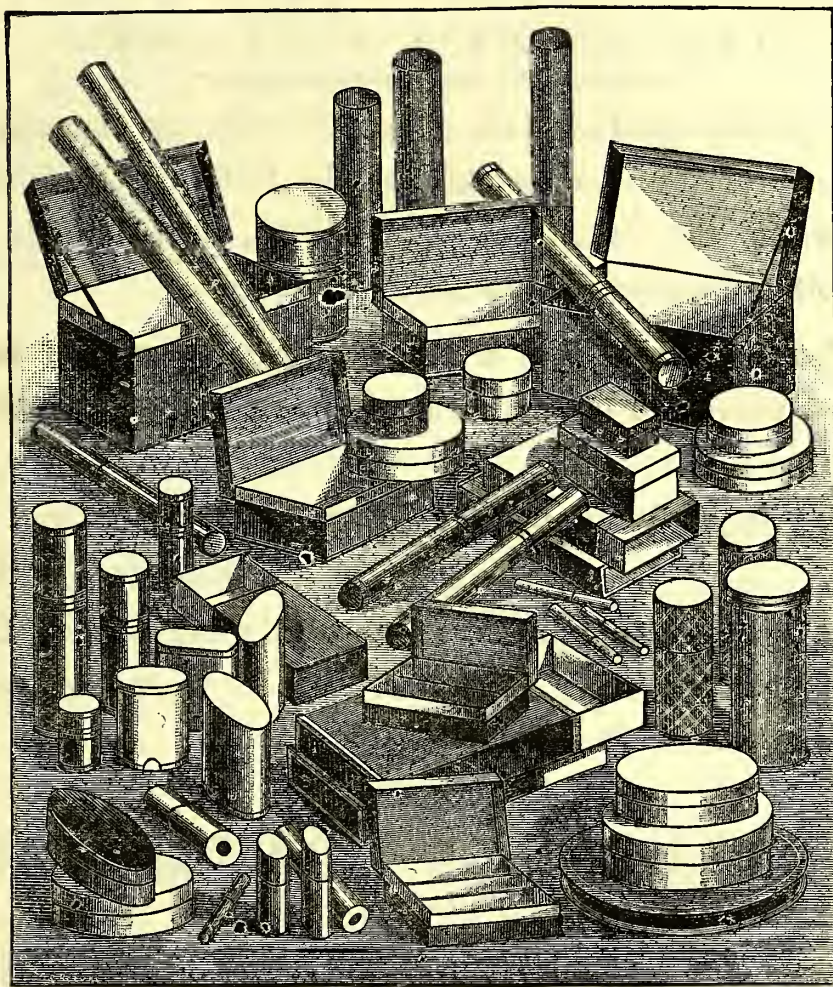
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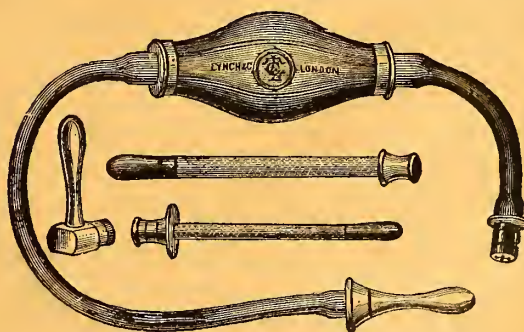
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435D Ditto, ditto, with bone rectum pipe, elastic-gum vagina pipe, and leather shield, in slide cedar boxes, ,	1	15	0
435E Ditto, ditto, in oval leather box, complete	2	2	0
436 LYNCH'S FAMILY, on Higginson's principle, fitted with bone bulb-pointed rectum pipe for adults, elastic-gum rectum pipe for children, elastic-gum vagina pipe and leather shield, in mahogany box...per doz.	2	8	0
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437A LYNCH'S PERFECTION, in mahogany box	2	17	0
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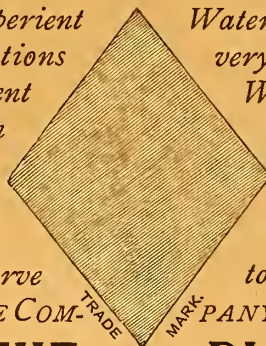
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